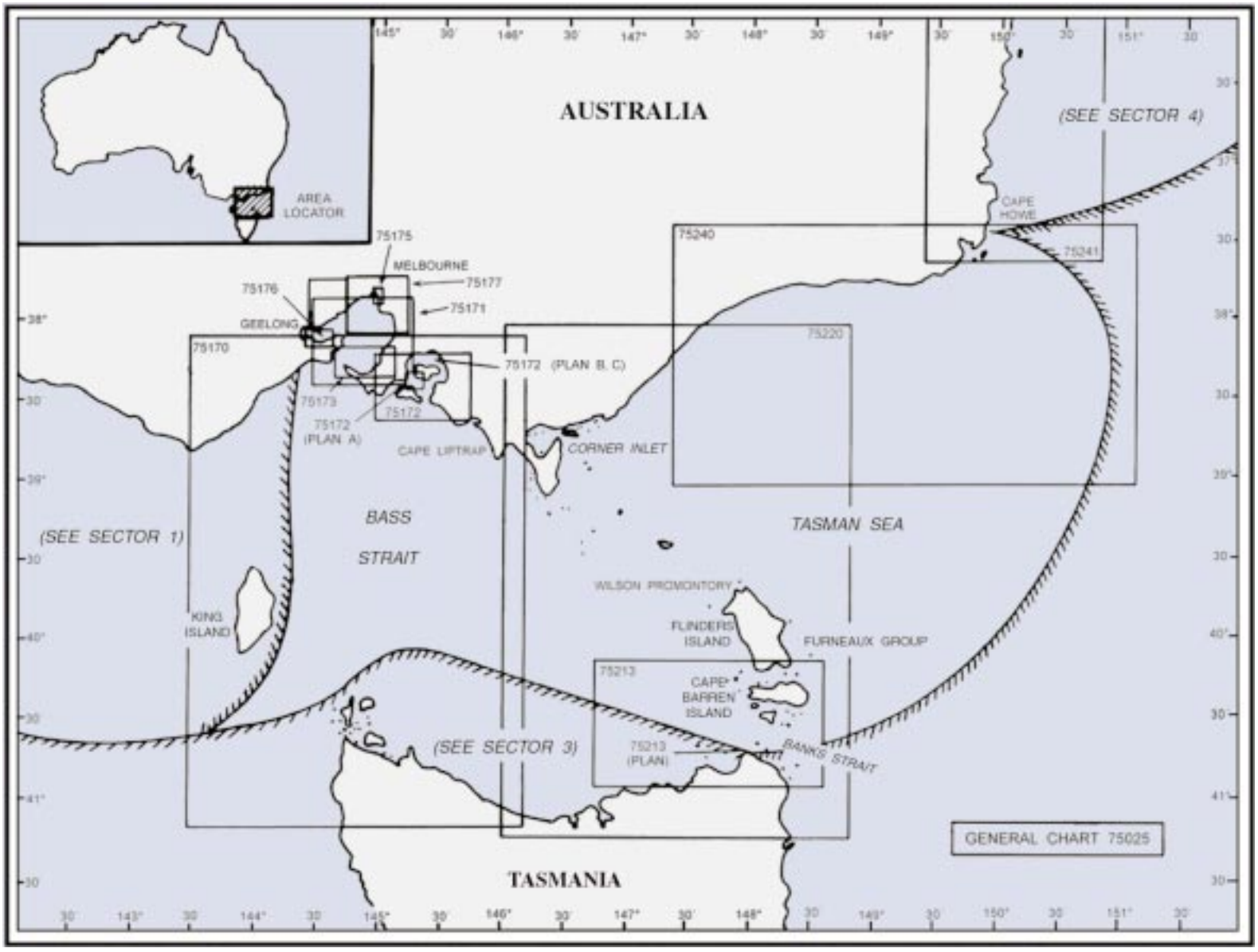


**Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.**

SECTOR **2** — CHART INFORMATION

# SECTOR 2

## AUSTRALIA—PORT PHILLIP TO CAPE HOWE, INCLUDING THE EASTERN ENTRANCE OF BASS STRAIT

**Plan.—**This sector first describes the S coast of Australia from Port Phillip to Wilsons Promontory, followed by a description of the eastern entrance of Bass Strait and the islands in the entrance, including the Furneaux Group; Banks Strait is described in paragraph 3.4. The SE coast of Australia, from Wilsons Promontory to Cape Howe, is then described. The arrangement of the sector is from W to E for the coastal description, and from NW to SE for the description of the islands.

### General Remarks

**2.1 Winds—Weather.—**In Bass Strait, the strongest gales are frequently from the S and SE, accompanied by thick weather and often by heavy rain. Northerly winds are common both in summer and winter, and predominate over all others winds in frequency and force, particularly during the winter months; these winds, being off the land, are not especially remarkable or destructive.

In good weather, a light N wind is frequently encountered near the shore, and a light S wind is experienced offshore. The N wind of the coast of Victoria is generally a NW wind in the vicinity of Cape Howe. In January, February and March, E winds with good weather are not uncommon; however, these conditions can not be depended upon in any other season. On the E sides of the strait and of Tasmania, NE winds are prevalent, though they are seldom forceful.

As the W part of Ninety Mile Beach is approached, E gales are common; Wilson Promontory appears to mark the dividing line.

January and February are the best months for making a passage to the W through Bass Strait. The gales that prevail in the strait begin in the NNW and gradually veer to the W and SW, at which point the wind generally subsides. Thick weather accompanying a breeze from the SE, particularly from May to September, is generally the precursor of a gale.

Within 100 miles of the S coast of Australia the most stable weather prevails during January, February, March, and April. The wind is generally SE and of the nature of land and sea breezes, being more E during the night and early morning and more S during the day and afternoon. The E wind in this season is light after sunrise, freshening in the morning from the SSE to a force of 5 or 6, and often developing a haze if the morning has been hot; the sea breeze attains its greatest force during the afternoon, becoming lighter nearer sunset as its direction changes toward the land.

Should the barometer fall, the winds, instead of shifting to the S in the morning, may turn to the N, resulting in a very hot, dry wind for one to three days. When the N wind is light, a moderate gale from the W to SW usually springs up, seldom lasting more than 24 hours, after which a period of good weather again ensues with SE winds.

At the end of April, the SE winds cease almost entirely, though they may resume at intervals during the month of May; at this time there are occasionally fresh NE winds. From the middle of May until the end of October, W winds prevail, the gales from that direction quickly raising a heavy sea and equally forceful near the land as farther seaward.

### Port Phillip to Western Port

**2.2 Point Nepean** (38˚18'S., 144˚39'E.) was previously described with Port Phillip in paragraph 1.28.

The coast between Cape Nepean and Cape Schanck, about 16 miles SE, has depths of not less 20m within 1 mile of the coast, with the exception of Five Fathom Banks, which were described with the entrance to Port Phillip in paragraph 1.28. The highest hill along this coast is 154m high and lies about 2.2 miles NNE of Cape Schanck.

**Cape Schanck** (38˚30'S., 144˚53'E.) is a cliffy headland, 84m high, with conspicuous Pulpit Rock, 12m high, close S, and smaller rock, 1.2m high, about 0.2 mile S of the cape. Cape Schanck has been reported to give good radar returns at 19 miles.

Cape Schanck Light is shown from the summit of Cape Schanck, about 0.5 mile NNW of the cape. During brush fires, which occur during the summer months, the smoke has been observed to give the light a red appearance. The lighthouse is connected by telephone with **Dromona** (38˚20'S., 143˚57'E.).

Picnic Point, about 1.5 miles E of Cape Schanck, is a bold, sheer bluff, 75m high. The coast from Picnic Point to West Head, about 5.5 miles E, is closely bordered by rocks.

**West Head** (38˚29'S., 145˚02'E.), the W entrance point of Western Port, is a cliffy projection, 26m high, fringed by reefs and sunken rocks. Bismark Reef extends about 0.7 mile off-shore from a position about 0.7 mile W of West Head. A spit, with a depth of 0.6m near its outer end, extends about 0.2 mile SE of West Head, and Flinders Rock, with a depth of 3m, lies about 0.2 mile S of the outer end of the spit.

### Western Port (Hastings)

World Port Index No. 53930

**2.3** Western Port is an extensive bay fronted by Phillip Island; its two entrances lie W and E of Phillip Island. The W and main entrance, between West Head and **Point Grant** (38˚31'S., 145˚07'E.), about 4.5 miles ESE, is easy of access and available to vessels of deep draft. The eastern entrance, between **Cape Woolamai** (38˚34'S., 145˚21'E.), the SE extremity of Phillip Island, and Griffith Point, nearly 2 miles NNE, on the mainland, is a narrow channel available only to small vessels.

French Island, in the middle of the bay, N of Phillip Island, divides Western Port into two arms; East Arm lies S and E of French Island, and North Arm lies W and N of the same island.

The dredged Western Channel extends in a NE direction off the NW side of Phillip Island; then a dredged channel leads in a N direction to the berthing facilities on the W side of North Arm. Crib Point Oil Terminal Jetty can accommodate tankers up to 165,000 grt.

**Port limits.—**The port of Western Port includes all inlets, rivers, bays, harbors and navigable waters bounded W by a line joining West Head and Point Grant, and E by a line drawn 045˚ from Cape Woolamai.

## Tides—Currents

The tidal rise at Stony Point is 2.8m at MHHW, and 2.5m at MLHW.

The tidal currents attain a rate of about 3.7 knots in the western entrance to Western Port, between Middle Bank and Grossard Point; a rate of about 2 knots in North and East Arms; rates of from 2 to 3 knots usually in the Eastern Entrance; and rates of from 5 to 6 knots in The Narrows.

## Depths—Limitations

**Western Entrance.—**Western Channel is dredged to 14.9m from its seaward end to about 1.5 miles SSW of Sandy Point. Then a channel dredged to 14.3m extends to abreast Sandy Point. A channel dredged to 14.1m extends between the drying mud flats on the W and E sides of North Arm to abreast Long Island Point.

Crib Point Jetty is a decommissioned oil terminal, with two berths, now used for ship repairs. No. 1 Berth, the N berth, is 366m long, and can accommodate vessels of 165,000 dwt, in a dredged depth of 15.8m alongside. There is a swinging basin with a diameter of 610m in a depth of 14.3m.The berthing head is 38m long, and the maximum permissible length of a vessel berthing is 280m. No. 2 Berth, the S berth, is 274m long, and can accommodate tankers up to 95,000 dwt, in dredged depths of 12.8m alongside. The berthing head is 38m long, and the maximum permissible length of a vessel berthing is 216m.

Long Island Point Liquids Pier has a berthing head 105m in length, and can accommodate tankers up to 165,000 dwt with a maximum length of 300m. There are dredged depths of 15.8m in the berth, and dredged depths of 14.3m in the swinging area E of the berth.

Steel Industry Wharf is approached by a channel, dredged to 9.1m, leading from the swinging area off Long Island Point Liquids Pier. No. 1 Berth, the S berth, is a ro-ro berth and has an alongside depth of 12.1m. No. 2 Berth, with alongside depths of 10 to 12.1m, is 152m long and can accommodate a vessel up to 200m in length.

**Caution.—**Due to shoaling, a least depth of 14m exists in the channel between Buoy No. 19 and Buoy No. 21, just E of Stony Point.

**Eastern Entrance.—**The Eastern Entrance to Western Port lies between **Cape Woolamai** (38˚34'S., 145˚21'E.) and Griffith Point, nearly 2 miles NNE. The entrance is narrow and tortuous, and the tidal currents run with great force through The Narrows, attaining a velocity of 5 to 6 knots at times.

The Eastern Channel entrance is available at HW for a vessel drawing less than 3.7m as far as San Remo, and for a vessel drawing less than 3m through the inner passage to Western Port. The inner passage, N of Daxis Point and Woody Point, extends about 1.2 miles NNE through shoal banks, parts of which dry, to East Arm.

The Eastern Entrance Bridge spans The Narrows, between Woody Point and San Remo. The center span is 61m wide, with a vertical clearance of 12.2m, and is marked by lights on its up and downstream sides. The pylons of the center span are illuminated by floodlights. Overhead power cables, with a vertical clearance of 18.3m, span The Narrows, close SW of the bridge.

An L-shaped jetty, off San Remo, has a head 25.3m long, outside of which there is a depth of 9.1m.

Off Woody Point is a jetty, with an alongside depth of 3m.

## Aspect

**Western Entrance.—Point Grant** (38˚31'S., 145˚07'E.), the W extremity of West Entrance is a craggy headland, 34m high, from which a reef extends about 0.5 mile WSW. The Nobbies, consisting of two islets, lie on this reef; Round Islet, 30m high, sheer on all sides and is marked by a light, and the other islet is 6m high. Black Rock, 10m high, about 0.7 mile SW of Round Islet, and close S of Seal Rocks, lies on a reef on which the sea breaks heavily in a S swell. Point Grant has been reported to give good radar returns at 18 miles.

A shoal, with a depth of 13.7m, lies about 1 mile WNW of Black Rock. Flinders Bank, with a depth of 22m, lies about 2 miles SSW of Black Rock.

The S coast of Phillip Island, from Point Grant to Cape Woolamai, about 12 miles ESE, has depths of over 20m from 0.5 to 0.7 mile offshore.

**Caution.—**A framework observation tower, 26m high, on the summit of the largest of the Seal Rocks, should not be confused in poor visibility with the light structure on Point Grant.

Cape Woolamai, a remarkable helmet-shaped granite headland, of reddish color and marked by a light, rises abruptly from the sea; the cape, 109m high, is the SE extremity of Phillip Island and its highest point. The cape is fringed by drying and sunken rocks, none of which extend more than 0.2 mile offshore. Quoion Hill, 68m high, lies on the W side of Phillip Island, about 3.5 miles ENE of Point Grant. Pyramid Rock, high, needle-shaped, and steep-to on its seaward side, lies about 0.2 mile S of a point about 5 miles E of Point Grant; behind the point the ground slopes gradually to McGregor Hill, about 1.2 miles N.

Cape Woolamai has been reported to give good radar returns at 19 miles.

**Northwest side of the entrance.—**Flinders Breakwater Jetty lies about 0.7 mile N of West Head (38˚29'S., 145˚02'E.), which was previously described in paragraph 2.2.

The NE and greater part of the bight between West Head and Sandy Point, about 11 miles ENE, is filled with shallows and foul ground. Middle Bank, with depths of less than 10m, and which dries in places, extends about 7 miles SW from the coast W of Sandy Point. The outer part of Middle Bank, over which the sea breaks in a heavy swell, has depths of 5.2 to 8.2m.

Western Hill, 47m high, and conspicuous Coolart Tower lie about 3 and 4.5 miles WNW, respectively, of **Sandy Point** (38˚25'S., 145˚14'E.). The land from Western Hill to Sandy Point is low and marshy. A beacon, 1.2m high, stands on Sandy Point.

**Phillip Island—Southeast side of the entrance and N coast.—**The coast between Point Grant and the SW entrance point of Cat Bay, about 1 mile NE, is fronted by reefs and a shoal bank which extends up to 1 mile offshore.

**McHaffie Point** (38˚28'S., 145˚10'E.), about 4 miles NE of Point Grant, may be recognized by the red-colored razor-backed ridge, 9 to 12m high, close SW. A light is shown on the point. McHaffie Reef, with a depth of 4.6m over its outer end, extends about 0.3 mile NW of McHaffie Point. Hen and Chickens Reef, which dries, lies about 0.2 mile W of McHaffie Point.

Red Rock Point, marked by a white triangular beacon, 4.3m high, lies about 2 miles ENE of McHaffie Point. Penguin Rock and a remarkable red cliff, 12m high, lie close SW of Red Rock Point.

There is an L-shaped jetty at Cowes, about 2 miles E of Red Rock Point; the head of the jetty is 105m long, with a depth of 6.4m alongside its outer face.

The coast between Cowes and Observation Point, about 2.7 miles E, is formed by a steep sandy beach, backed by tall dense trees. Observation Point is a low, narrow sand spit, wooded at its inner end.

**Tortoise Head** (38˚25'S., 145˚16'E.), the SW extremity of French Island, is a low flat-topped promontory. A white beacon is shown from the summit of Tortoise Head, which is 35m high. A reef extends about 0.2 mile from Tortoise Head and from a low point projecting from the W side of the promontory. A spit, with depths of 4m, extends about 0.7 mile SW from Tortoise Head. The W end of a shallow bank, parts of which dry, lies about 1 mile SW of Tortoise Head. Channels, available to small vessels with local knowledge, separate the above bank from the SW side of French Island.

East Arm, between the N side of Phillip Island and the bank off the SW side of French Island, is about 1 mile wide, with depths of 9.7 to 20m, but E of Phillip Island it is filled by Eastern Flat, which terminates in a narrow spit, about 1 mile NNE of Observation Point. A channel, between Eastern Flat and the S and SE sides of French Island to Stockyard Point, about 5.5 miles E of Tortoise Head, has a least depth of 7.3m in the fairway.

**North Arm—West side.—**The coast from **Sandy Point** (38˚25'S., 145˚14'E.) to the entrance of Watson Inlet, about 9 miles NNE, is low, marshy, and fronted by mud banks.

Hanns Inlet, entered between Sandy Point and Stony Point, about 2.2 miles N, is filled by a drying flat; a red beacon, about 0.6 mile N of Stony Point, marks the edge of the flat. A tortuous channel, with a least depth of 2.1m over a least width of about 51.8m, winds through the flat to Flinders Naval Depot, at the head of the inlet. The N and S entrance points of the channel are marked by lights.

There is a wooden naval wharf, 241m long, at the head of the inlet; it is available for vessels drawing less than 4.6m.

**Caution.—**Navigation of the inlet presents some difficulty due to a right-angled bend in the channel, where the assistance of a tug for a single screw vessel is essential. Navigation should only be attempted within 1 hour of HW, when the tidal currents, which attain a considerable rate in the inlet, no longer set across the channel over the mud banks. Favorable weather conditions are also essential. A set across the entrance to the channel should be guarded against. The mud banks on the sides of the channel are steep-to.

Stony Point, marked by a beacon, 4.6m high, is a railway terminus. An L-shaped jetty, extending NE from the point, has a head, 134m long, with depths of 6.2m alongside its NW 61m front, and 2.1m alongside the remaining length.

Lights, in line bearing 288˚, lead to the jetty. A shoal, with depths of 1.5 to 2.7m, and marked SW by pile beacons, lies close NE of the jetty.

**Crib Point** (38˚21'S., 145˚13'E.), the site of a large oil refinery, lies about 1.5 miles N of Stony Point. A chimney, 91m high, lies about 0.2 mile NW of the point. Crib Point Oil Terminal Jetty extend E from the point. Lights, in line bearing about 320.5˚, lead to the N berth.

Hastings Bight, between Crib Point and Long Island Point, about 2.5 miles N, is mainly filled with a mud flat, with Sandstone Island in its S part. Hastings Channel, with a least depth of 1.8m and marked by beacons, leads to a jetty at the town of Hastings in the NW part of the bight.

Long Island Liquids Pier lies close E of Long Island Point. Flare chimneys of a large refinery lie about 0.4 mile W of the pier. Two sets of range lights, sharing a common rear range light, are shown from the pier and mark the limits of the swinging basin.

Steel Industry Wharf lies close offshore about 1 mile N of Long Island Point.

**North Arm—East side.—**The coast from Tortoise Head (38˚25'S., 145˚16'E.), previously described above, to Scrub Point, about 7.5 miles N, is fronted by a drying mud bank extending up to 0.5 mile offshore.

A drying mud bank, between Tea Tree Point and Scrub Point, lies parallel with the coast and separated from it by a passage, through which a depth of about 6.1m can be carried, but it is encumbered with shallow patches. Middle Spit, marked on its E side by two beacons, is separated from the N part by a narrow channel. Two shoals known locally as Middle Bank, with depths of 0.6m and 0.3m, respectively, lie about 0.2 mile W of the above drying mud bank. The S part of Middle Bank is marked at each end by a pile beacon, and a beacon marks the N end of the N part.

**North Arm—North part.—Scrub Point** (38˚17'S., 145˚17'E.) is wooded, 6.1m high, with a beacon, 3m high, on it. Quail Island, about 2 miles N of Scrub Point, is low, wooded, and bordered by thick mangroves on its W side.

Bagge Harbor lies between the mud flats fronting Scrub Point and Quail Island. Bagge Harbor has depths of 10m in mid-channel, but in it are two rocks; Eagle Rock, awash, and Crawfish Rock, which dries about 3m, lie about 1.2 miles NNW and 1 mile NNE, respectively, of Scrub Point. Lights are shown from Eagle Rock and Crawfish Rock. There is a least depth of 10.6m in the fairway from Long Island Liquids Pier to Bagge Harbor.

The N part of North Arm extends about 9 miles E from Bagge Harbors and is filled with drying mud flats, intersected by several channels, some of which lead to the creeks and inlets on the N coast, and others wind E and terminate about 1 mile off the E coast.

**Eastern Entrance.—West side.—**The coast from Cape Woolamai to **Red Point** (38˚33'S., 145˚22'E.), about 1 mile N, is faced with cliffs. Red Point is formed by red granite boulders, 15.2m high; a white beacon stands on the point.

A bight between Red Point and Woody Point, about 2 miles N, is formed of rocky points and sandy beaches, and is bordered by a bank, with depths of less than 5.5m, extending from 0.1 to 0.5 mile offshore. A red beacon marks the N end of Black Reef, on the SW side of the entrance channel, about 0.6 mile NW of Red Point. Woody Point, on the NW side of The Narrows, is low and fringed with reefs; a red beacon stands on the outer rock. The town of Newhaven stands on Woody Point. Lights, in line bearing about 306˚, situated about 1.5 miles NW of Red Point, lead through the outer part of the channel entrance.

A light is shown on the N shore, about 0.4 mile WSW of Woody Point.

A red beacon, about 0.3 mile SSW of Woody Point, marks the W side of the channel.

**Eastern Entrance.—East side.—**Griffith Point, about 1 mile NE of Red Point, is a bold sandstone bluff, 21m high, bare of trees for some distance inland, and fringed by reefs. A range of sparsely-wooded hills, with prominent plantations around homesteads on its slopes, extends E and NE. Bass Hill, 284m high, one of the summits of the range, lies about 10 miles ENE of Cape Woolamai.

Between Griffith Point and Davis Point, about 1.2 miles NNW, Middle Sand, on which are patches of sand and rock which dry, extend about 1 mile offshore, almost completely obstructing the Eastern Entrance; in bad weather, especially during the outgoing current, the sea breaks over the edge of this bank. Davis Point, low and sandy, lies on the SE side of The Narrows. San Remo lies just inside Davis Point.

## Pilotage

Pilotage is compulsory in Western Port except for vessels specially exempted. Vessels requiring a pilot should notify "Seapilots Melbourne" of their ETA at Western Port 24 hours in advance. Changes in the ETA of more than 1 hour should be notified immediately, and the time should be confirmed 4 hours before arrival or, if the vessel is delayed, 4 hours before the original ETA. The pilot boarding place is 3.5 miles S of West Head (38˚29'S., 145˚02'E.). If the pilot launch is unable to maintain its position due to the weather, vessels drawing up to 9.7m may embark a pilot about 2 miles E of Flinders Breakwater Jetty.

## Anchorage

Western Port Harbor Control, established at Stony Point, directs all port operations and can be contacted on VHF radio.

Anchorage may be obtained, in a depth of 15m, in East Arm, from 0.5 to 1 mile E of Cowes Jetty, and about 0.5 mile offshore. There is also good anchorage, in a depth of 14.6m, sand and shells, about 0.5 mile offshore, abreast Observation Point.

Vessels carrying explosives must anchor at a distance exceeding 0.2 mile from any jetty or wharf in Western Port.

An anchorage area, with a least depth of 8.5m, lies about 0.5 mile NE of Long Island Liquids Pier.

Good anchorage for small vessels may be obtained, in 5m, off the head of Flinders Breakwater Jetty (38˚29'S., 145˚02'E.).

Anchorage may be obtained, in 7.3 to 14.6m, about 1 mile NE of Pyramid Rock (38˚32'S., 145˚13'E.), sheltered from N and NW winds. Care must be taken to avoid a wreck, with a depth of 5m, about 1.2 miles NE of Pyramid Rock; this wreck is a scuttled dredge providing an artificial fishing reef.

A small vessel drawing 4.6m can obtain anchorage, sheltered from all winds except SE gales, about 0.2 mile NE of Red Point (38˚33'S., 145˚22'E.), off Eastern Entrance.

## Directions

Crib Point is a first port of entry. Vessels subject to quarantine must not proceed N of a line joining Sandy Point, Tortoise Head, and Cobb Bluff (38˚27'S., 145˚26'E.), or through the area 1 mile S of a line joining Sandy Head and Tortoise Head.

**Western Entrance.—**Vessels entering should pass about 1.5 miles NW of Seal Rocks, steering for McHaffies Point Light bearing 057˚. When Fairway Lighted Buoy is abeam to port, the buoyed channel should be followed to the berthing facilities in North Arm. Vessels bound for the anchorage in East Arm can leave the buoyed channel N of Red Rock Point. The spit extending from Eastern Flat can be avoided by keeping 0.5 mile off the N side of Phillip Island until the anchorage N of Observation Point has been reached. Caution should be exercised when off the N side of Phillip Island, as the tidal currents set strongly along that shore.

At night, approaching from the W, after having rounded Cape Schanck, keep Point Grant bearing less than 090˚ until the white sector of McHaffie Point Light is entered, when course should be altered to 057˚ with that light ahead. When Fairway Lighted Buoy is abeam to port and McHaffies Point Light changes from white to red, alter course NE to pass through the buoyed channel.

Approaching from the E by day, a vessel should pass about 3.2 miles SW of Point Grant, steering about 304˚. When Seal Rocks are in line with Point Grant, bearing 059˚, the vessel should alter course to 000˚. When Point Gossard Light bears 057˚, course should be altered NE and the light structure steered for on that bearing. Then the directions given above should be followed.

Approaching from the E at night, a vessel should proceed as above. When McHaffies Light changes from red to green, alter course to 000˚. Then the directions given above should be followed.

**Eastern Entrance.—**A vessel may enter Western Port by the Eastern Entrance on the top of HW, drawing less than 3m with an ordinary rise of tide, and drawing less than 3.7m on a good spring tide. It should be remembered that the tidal currents are very strong in The Narrows, and a vessel drawing nearly 3.7m should wait at the inner anchorage about 0.5 mile ENE of the front light of the entrance range, N of the lighted buoy at the W end of Middle Sand, until nearly slack high water. Local knowledge is necessary.

A vessel should pass through the outer part of the Eastern Entrance, with the entrance range lights in line bearing about 306˚. If desired, anchorage may be taken between Red Point and the beacon marking Black Reef.

From this outer anchorage a vessel should pass N of the beacon marking Black Reef, where the channel is only about 50m wide, then steer to keep the lighted buoy marking the W end of Middle Sand on the starboard bow, giving it a berth of about 100m. Then, if the vessel does not intend to anchor N of the latter lighted buoy, proceed N and NE, passing W of the lighted buoy off the NW end of Middle Sand, then pass E of the beacon about 0.3 mile SSW of Woody Point, and NW of Davis Point, into The Narrows.

## Western Port to Wilson Promontory

**2.4** The coast from the E entrance point of Western Port to **Black Head** (38˚33'S., 145˚28'E.), about 4.2 miles E, is fronted by cliffs, with depths of over 11m about 0.2 mile offshore. Anderson Hill, 153m high and grassy-topped, lies about 1.7 miles N of Black Head, with the small town of Anderson conspicuous on its W fall.

From Black Head to Coal Point, about 8 miles SE, the coast is a succession of sandy hillocks, 30 to 43m high. Numerous rocks, one of which dries, extend about 1 mile S of Coal Point; the sea breaking heavily on these rocks shows this point to be dangerous on approach.

**Cape Patterson** (38˚41'S., 145˚36'E.), about 2.2 miles SE of Coal Point, is low, ill-defined, and the least conspicuous point along this part of the coast. A conspicuous tower, which is also radar conspicuous, stands nearly 1 mile NNE of the cape. Eagles Nest, a conspicuous rock, 18m high, about 3 miles E of the cape and about 100m offshore, is a useful mark for identifying the cape; the coast in the vicinity of the rock is cliffy.

The highest land within 2 miles of the cape is Honeysuckle Hill, 43m high, about 2 miles E of the cape, and this elevation scarcely increases until it joins the range of hills, over 274m high, which extends E and NE of **Bass Hill** (38˚29'S., 145˚33'E.). The cape has been reported to give good radar returns up to 14 miles.

A reef, steep-to on its seaward side, extends about 0.3 mile S of Cape Patterson. Depths of 9.1 to 11m lie up to 1 mile SE of Eagles Nest.

Cody Bank, with a least depth of 22m, lies about 8 miles SSW of Cape Patterson.

Petril Rock, 0.6m high, lies about 0.4 mile offshore on a bank with depths of less than 9.1m, extending about 1 mile offshore between Eagles Nest and **Point Smythe** (38˚39'S., 145˚44'E.), the W entrance point of Anderson Inlet.

Anderson Inlet is mostly filled by drying mud flats, intersected by shallow channels. It is only available for small vessels of about 1.5 to 1.8m draft, according to the condition of the bar and the state of the tide.

The coast from Point Smythe to Ten Whites Creek (Ten Mile Creek) (Watercross Creek), about 13.5 miles SE, is formed of bare sandhills, 30m high. A small sandstone rock, 4.6m high, lies close offshore, about 0.7 mile NNW of the creek entrance; sunken rocks extend about 0.4 mile seaward of the rock.

The coast for about 2 miles S of Ten Whites Creek consists of overhanging sandstone cliffs with above-water and sunken rocks extending up to 0.5 mile offshore. Arch Rock, 25m high, with a natural arch on its E side, lies midway along this part of the coast and about 0.2 mile offshore; a rock, which dries, lies about 100m WSW.

The coast trends about 3 miles SSE to a conspicuous islet, 19m high, close offshore nearly 1 mile NNW of Cape Liptrap. Sunken rocks extend up to 0.3 mile offshore between the islet and the cape.

**2.5** **Cape Liptrap** (38˚55'S., 145˚55'E.), 90m high and nearly vertical, forms the SW extremity of a table-topped promontory which attains an elevation of 168m at Liptrap Hill, about 2.5 miles NE of the cape. A light is shown from the cape. Cape Liptrap has been reported to give good radar returns at 18 miles.

The coast between Cape Liptrap and Grinder Point, about 2 miles ENE, forms a bight; then to Bell Point, about 2.5 miles farther ENE, the land is lower and fronted by rocks from 1.5 to 9.1m high, none of which extending more than 0.2 mile offshore. Bell Point may be identified by a large broad-topped rock, 12.2m high, lying about 0.1 mile E of it.

**Caution.—**The coast between Cape Liptrap and Bell Point is fringed by drying and sunken rocks, and the sea breaks heavily for 0.5 mile offshore. Vessels are cautioned to keep at least 1 mile off this part of the coast where shoal water was reported in 1964.

Waratah Bay, formed between **Bell Point** (38˚53'S., 146˚00'E.) and Shallow Inlet, about 8 miles E, affords good anchorage except during S and SE gales.

An islet, 18m high, lies close off the W shore of the bay, about 0.3 mile N of Bell Point. Bird Rock, 12m high, and the highest of a group of rocks within 0.2 mile of the shore, lies about 0.6 mile farther N, E of the village of Walkerville. A light is shown about 0.2 mile SW of Bird Rock.

From Bird Rock the coast is faced with cliffs and fringed with rocks for about 3 miles NE; then the land decreases in elevation to about 30m and the ordinary feature of sandhills recurs until the entrance of Shallow Inlet.

Anchorage may be taken in the white or green sectors of the light SW of Bird Rock, with good shelter from SW gales, but a good lookout should be kept for a sudden change of the wind from the E. A good berth is in 11m, sand, about 0.7 mile NE of the light structure near Bird Rock, or about 1 mile off the head of the bay in a depth of about 13m.

## Wilson Promontory

**2.6** Wilson Promontory is a lofty promontory, with South Point, its S extremity, about 25 miles SE of Cape Liptrap. The promontory is connected with the mainland NW by a low, sandy neck, which separates Waratah Bay from Corner Basin to the NE.

Rugged mountain ranges on Wilson Promontory are wooded on the upper and less exposed parts, but are nearly destitute of vegetation and descend abruptly to the sea towards the sides of the promontory. The principal mountains are **Mount Vereker** (38˚58'S., 146˚22'E.), 637m high, the NW mountain, with a spur extending NNW of it. From the summit of this spur, 504m high, there is a gradual slope WNW to the NW termination of the high and of the promontory. In the central part of Wilson Promontory, Mount Latrobe, 758m high, and Mount Ramsay, 683m high, recognized easily by its flat top. Mount Wilson stands about 2 miles SSE of Mount Ramsay, with an elevation

of 708m. The mountain ranges are of granite with immense boulders; these boulders are particularly noticeable in the Boulder Range, which lies at the SE end of Wilson Promontory, and is separated from the Wilson Range by a low valley extending E-W across the promontory.

**2.7 Wilson Promontory—West side.—**The coast between the entrance of Shallow Creek and Black Rock, 9m high, about 6 miles SSE, is formed of sand dunes.

**Shellback Island** (38˚58'S., 146˚14'E.), about 1.5 miles SW of Black Rock, is 109m high, steep-to, and conspicuous over the land from Corner Basin. It is the N island of the group on the W coast of Wilson Promontory.

Tongue Point, about 1.7 miles SE of Shellback Island, is 51m high, with a conspicuous conical rock, 9.1m high, close W of it, and projects about 1 mile from the coast. The land inland of the point is high, rising to the Latrobe Range.

Norman Island, about 1.5 miles SSW of Tongue Point, can be recognized by its two peaks, the N and higher of which is 96m high.

Anchorage, during SW winds, may be taken, in 16.4 to 20m, from 0.1 to 0.2 mile off the E side of the island. Coastal vessel of low power bound W and meeting a SW gale, after rounding Wilson Promontory, might find it convenient to anchor here in preference to running back and anchoring in Waterloo Bay, E of the promontory.

Four bays, separated by Leonard Point, Pillar Point, and Norman Point, lie SE of Tongue Point. Oberon Bay is entered between **Oberon Point** (39˚05'S., 146˚19'E.) and Norman Point, about 1.5 miles N, and affords the best anchorage; it lies at the W end of the valley between Wilson Range and Boulder Range. None of the bays can be recommended due to the prevalence of SW winds, and a SW gale may spring up suddenly. Oberon Bay has a broad sandy beach upon which the sea breaks heavily.

**Anchorage.—**Good shelter has been found in Oberon Bay during E gales, about 0.7 mile NNE of Oberon Point.

The coast between Oberon Point and Southwest Point, about 3 miles SSE, is steep-to, bold, and cliffy, the cliffs being several hundred meters high in places. Mount Norgate, 417m high, the W summit of the Boulder Range, lies about 1.2 miles SE of Oberon Point.

The Glennie Group, consisting of four islands, lie about 4 miles W of Oberon Point, and are steep-to on the W side. Great Glennie Island, the largest island, is saddle-shaped and 138m high near its S end; it is composed of granite, large blocks of which are strewn over it, giving it a castellated appearance. Ramsbotham Rocks, 1m high, over which the sea generally breaks heavily, and another somewhat larger rock, 4.6m high, lie about 0.2 mile N and 0.2 mile E, respectively, of the N end of Great Glennie Island. Dannevig Island, 76m high, lies close S of Great Glennie Island. Citadel Island, 109.4m high, lies close S of Dannevig Island, and is so-named due to its resemblance to an ancient fortress. McHugh Island, 65m high, lies close SE of Citadel Island.

Citadel Island has been reported to give good returns at 17 miles.

Citadel Island Light is shown from the summit of Citadel Island. A tank stands close N of the light structure, and a monolith stands near the N end of the island. The light is obscured from 270˚ to 360˚.

Anchorage can be taken, in 18.3m, off the E side of Citadel Island, about 0.2 mile E of the monolith.

**2.8 Wilson Promontory—South side.—**The S coast of Wilson Promontory, from Southwest Point to **South East Point** (39˚08'S., 146˚25'E.), about 3.7 miles E, rises abruptly to an elevation of about 300m.

South Point, about 1.5 miles ESE of Southwest Point, is a low, projecting, and stony point; it is also the S point of Australia. A rock, 4.6m high, lies about 0.1 mile WSW of South Point.

Wilson Promontory Light is shown from South East Point. The lighthouse is connected by radiotelephone with the lighthouses on **Cliffy Island** (38˚55'S., 146˚42'E.), **Deal Island** (38˚30'S., 147˚19'E.), and Swan Island (40˚44'S., 148˚06'E.).

Wattle Island, 82m high, lies with its E extremity about 0.4 mile WSW of South Point; the island, being so close offshore, from the S appears to be connected to Wilson Promontory. A rock, awash, lies about 0.1 mile SW of the W end of the island, and a rock, with a depth of less than 1.8m, lies about 0.1 mile SE of the E end of the island.

Wilson Promontory has been reported to give good radar returns at 24 miles.

**2.9 Off-lying islands and dangers.—**The Anser Group lies from 1 to 3 miles SW of Southwest Point. Anser Island, the NE island of the group, rises to a nipple-pointed summit, 152m high; it is cliffy in all directions, but least so on its N side.

**Cleft Island** (39˚10'S., 146˚18'E.), the SW and most remarkable of the group, is 113m high, sheer, and may be identified by its white appearance, also by its having a large slice out of its NW side, which gives it a cavern-like appearance.

**Cleft Island from NW**

Kanowna Island, 95m high, lies in the middle of the group. Anderson Islets, three in number and rocky, lie between the NW end of Kanowna Island and the NE end of Cleft Island; the two S islets are 12.2 to 15.2m high, with the N islet not as high.

Carpentaria Rock, with a depth of 1.8m, lies about 0.7 mile N of Cleft Island. The Anser Group has been reported to give good radar returns at 16 miles.

Forty Foot Rocks, about 4 miles S of Wilson Promontory Light, consists of three separate and distinct islets of granite.

The W and largest is 6.1m high, with a granite boulder, 6.1m high, on its S extremity, making this islet 12.2m high; when the sea is breaking over these rocks, this boulder is probably the only part visible. Forty Foot Rocks are steep-to. They are reported to give good radar returns at 13 miles.

**2.10 Rodondo Island** (39˚14'S., 146˚23'E.), about 6 miles SSW of Wilson Promontory Light, is a conspicuous conical mass of granite, rising to a distinct peak, 350m high; the peak is visible in clear weather for 30 miles, and is reported to give good radar returns at 19 miles. The island is steep-to and has high cliffs on all sides.

As the tidal currents about Rodondo Island are strong, sometimes having a velocity of from 4 to 5 knots, the neighborhood should be avoided.

West Moncoeur Island, 97m high, and East Moncoeur Island, 101m high, lie about 5 and 6.5 miles E, respectively, of Rodondo Island. The islands are almost bare, steep-to and apparently free of dangers; islets lie close N and S of West Moncoeur Island.

**Traffic Separation Scheme.—**A Traffic Separation Scheme has been established S of Wilson's Promontory and is best seen on the chart.

An Inshore Traffic Zone is situated between the traffic lane for westbound traffic and Wilson's Promontory.

**Tides—Currents.—**Off the S side of Wilson Promontory the tidal currents set E and W, but their direction is influenced by the wind. The tidal currents normally turn at about HW and LW.

Heavy E or W weather sets up an opposite current which continues after the storm has ceased. Near the promontory, after an E gale, the E current, which has been checked during this gale, continues to set E when the W current should have made; and the W current, at its strength, sets N, except inshore, where the tidal currents are little influenced by the wind. A SW gale has the opposite effect.

The velocity of the tidal currents off the S side of the promontory, where they are strongest, does not exceed 2.5 knots.

**Caution.—**Off the S side of Wilsons Promontory the soundings afford no guide, as there is deep water close to the coast, between it and the off-lying islands, and between the groups of islands.

Approaching the promontory at night from the W, the Anser Group does not show up against the higher land of the mainland.

The E entrance to Bass Strait lies between Wilsons Promontory and the NE end of Tasmania, about 120 miles SE, and is obstructed by numerous islands and dangers. The Fur-neaux Group of islands lies across the SE part of the entrance and is separated from Tasmania by Banks Strait.

Banks Strait will be described beginning in paragraph 3.4.

**Tides—Currents.—**In the E entrance to Bass Strait, the flood sets SW and the ebb current sets NE.

## The Curtis Group

**2.11 Curtis Island** (39˚28'S., 146˚39'E.), about 18.5 miles SE of Rodondo Island, is the largest of the Curtis Group, and the most remarkable feature of Bass Strait. It rises in two peaks; the S peak is square-shaped and 335m high, and the N peak is 224m high, with a bare granite summit. The sides of the island are precipitous, especially at the S end. Clarendon Rock, with a depth of less than 2m and steep-to, lies about 0.7 mile ESE of the N end of Curtis Island; the sea breaks over it in heavy weather, but it is generally difficult to distinguish.

**Caution.—**This area is subject to continued volcanic uplift and shallower depths than charted may be encountered.

Cone Island, rocky and 112m high, lies about 1.2 miles SE of the S end of Curtis Island. Two rocks, close together, lie about 0.2 mile N of Cone Island; Passage Rock, the inner rock, is 2m high and the outer rock dries. A remarkable leaning pinnacle rock, 25m high, lies among other rocks close off the S side of Cone Island.

Sugarloaf Rock, the S of the group, is 94m high and lies about 1.5 miles S of Cone Island.

Crocodile Rock, about 9 miles NW of Curtis Island, is a large smooth granite boulder, 0.6m high and one of a small group of rocks. It lies almost in mid-channel between Rodondo Island and the Moncoeur Islands to the N and Curtis Island to the S. The sea almost continuously sweeps over it, so that the rock itself is seldom visible; as a general rule, it is well-marked by breakers.

Cutter Rock, about 1.5 miles NE of Crocodile Rock, has a depth of 7.3m and is steep-to. The sea does not often break over the rock, but in rough weather there is a lumpy sea in its vicinity.

Devils Tower, a rugged islet, 111m high, lies about 6.5 miles NE of the NE end of Curtis Island. It is steep-to except for a few detached rocks close off its SW side. Viewed from the NW or SE, Devils Tower shows a double summit, the NE being the higher.

## The Hogan Group

**2.12 Hogan Island** (39˚13'S., 146˚59'E.), the largest of the group, is 130m high and lies about 21 miles NE of Curtis Island; its S and W sides are sheer. A light is shown close NW of the summit of the island.

Hogan Island has been reported to give good radar returns at 23 miles.

The Twin Islands, 46m and 33m high, respectively, lie about 0.3 and 0.4 mile N of Hogan Island. Long Island, 66m high and sheer, lies close off the NE end of Hogan Island. North East Islet, 20m high, and Seal Rock, 4m high, lie nearly 1 mile and 1.5 miles ENE, respectively, of Long Island. East Island, 50m high, lies about 1 mile SE of Long Island. Round Island, 47m high, lies close off the SE side of Hogan Island.

A rock, with a depth of 8.8m and which breaks occasionally, lies nearly 0.75 mile E of Round Island.

Two miles S of Round Island lies a shoal with a depth of 7.2m.

A depth of 16.4m was reported (1969) about 4 miles SE of Round Island. A depth of 18.3m, position approximate, lies about 2 miles NE of the latter depth.

**Anchorage.—**Sheltered anchorage in strong S winds may be obtained on the NE side of Hogan Island, in 18.3 to 37m, good holding ground, between the Twin Islands and Long Island.


**The Hogan Group from NW**

With W gales better anchorage may be obtained in a bay on the E side of Hogan Island, S of Long Island, in 11 to 28m, sand, stones, and rock; shoals and submerged rock extend about 0.1 mile offshore in the bay.

**Directions.—**At night or in hazy weather, it is prudent for a vessel, without local knowledge, and desirous of clearing the strait, to sight Curtis Island and pass S of Sugarloaf Rock and the Hogan Group. The summit of Curtis Island, Cone Island, and Sugarloaf Rock are remarkable features whose identity cannot be mistaken.

Having cleared the Traffic Separation Scheme S of Wilson's Promontory, a course should be set to pass N of the Hogan Group and SE of the Area to be Avoided SE of Lakes Entrance. This should be done by way of the Traffic Separation Scheme that has been established S of the Area to be Avoided.

## The Kent Group

**2.13** The Kent Group, consisting of four islands and several above-water rocks, lies about 18 miles SE of the Hogan Group.

**Erith Island** (39˚27'S., 147˚18'E.), the N island, rises to an elevation of 142m on its N side.

North Rock, 8m high, lies about 0.5 mile NNE of the NW end of the island; two smaller rocks lie about 100m S of North Rock.

Dover Island lies close S of Erith Island, to which it is connected at LW. Dover Island rises abruptly to an elevation of 237m on its S side.

Deal Island, the largest of the Kent Group, is separated from Erith Island and Dover Island by Murray Pass, which is about 0.5 mile wide, with a least depth of 31m. Deal Island rises to conical granite hills, some of which are clothed to their summits with an impervious scrub. The coast is generally precipitous, especially on its S side.

Deal Island Light is shown near the summit of Deal Island, which rises from South Bluff, the S end of the island, to an elevation of 288m. There is a radiotelephone at this lighthouse which can communicate with Wilson Promontory.

North East Island, 104m high lies about 1 mile NNE of the E end of Deal Island. A light is shown from the NW extremity of North East Island. Anise Rock a remarkable rock, 6m high, lies about 0.2 mile NW of the N end of the island. A 2.4m patch was reported (1959) about 0.7 mile NE of the island. A 9.7m shoal lies about 0.5 mile SE of the island, and a steep-to coral shoal, with a depth of 10.9m, lies about 2 miles farther SE.

**Tides—Currents.—**The tidal currents in Murray Pass attain a velocity of 2 to 5 knots, frequently causing a turbulent sea. In bad weather there are heavy tide rips off the salient points of the Kent Group, and especially at the entrances to Murray Pass.

**Anchorage.—**Of the numerous bays indenting the coasts of the Kent Group, there are only two in which it is at all safe to anchor, and both of these are in Murray Pass.

East Cove, on the W coast of Deal Island, about 2 miles NNW of South Bluff, affords good shelter in E and S winds, but is dangerous in a SW gale; the bottom is uneven, the holding ground not good, and during the strength of the tidal currents the swirls and eddies come well into the cove. At the head of the cove there is a sandy beach and a jetty, with a depth of 3.7m at its head.

West Cove, on the SE side of Erith Island, gives protection from all but NE gales, and as an anchorage is preferred to East Cove.

Judgement Rocks, the N and largest of which is Big Rock, 32m high, lies about 9 miles W of South Bluff of Deal Island.

**South West Island** (39˚32'S., 147˚08'E.), 98m high, lies about 0.7 mile S of Big Rock. A light is shown from the S side of the Island. Depths of less than 10m or less extend nearly 0.4 mile S of South West Island.

The passage between Judgement Rocks and South West Island should not be used.

## Islets and Dangers between the Kent Group and the Furneaux Group

**2.14** **Bass Pyramid** (39˚49'S., 147˚15'E.), about 19 miles S of South Bluff (Deal Island), is a bare, square-topped mass of granite, 72m high; it has frequently been mistaken for a vessel under sail. Shoal water extends about 0.5 mile SW, and an 18.3m patch lies about 1.5 miles SW of the rock. Depths of 20 to 37m lie about 0.5 mile from its E side. Bass Pyramid is usually surrounded by tide rips, except when there is no wind.

**Bass Pyramid from E**

Warrego Rock, about 13 miles SE of Bass Pyramid, has a least depth of 2.4m, and is steep-to. A rock, with a depth of 9.8m, lies about 1.5 miles SSW of Warrego Rock.

Wakitipu Rock, about 9 miles ENE of Bass Pyramid, has a depth of 2.4m and is steep-to. The position of this rock may be

discerned by the disturbed water over it, when it is not breaking.

**Wright Rock** (39˚36'S., 147˚32'E.), 40m high, about 11.2 miles ESE of the S extremity of Deal Island, is a remarkable granite rock resembling a huge head and shoulders. It should be given a berth of at least 1 mile, as the depths are irregular within that distance. Rocks lie close N and S of Wright Rock, and a depth of 10m lies about 1 mile NNW of it. Tide rips mark the vicinity of the rock.

**Wright Rock from S**

Endeavor Reef, about 2.5 miles ESE of Wright Rock, dries 0.6m, and is usually marked by heavy breakers.

Beagle Rock, about 5.5 miles ESE of Wright Rock, is 2m high and steep-to.

**Craggy Island** (39˚41'S., 147˚41'E.), bare and rocky, lies about 4 miles SSE of Beagle Rock. It rises to an elevation of 113m at its W end. Rocks extend about 0.2 mile from the W end of the island, and depths of 20 to 37m extend about 3 miles SW of the same point. An above-water rock lies on the N side of a shoal, with a depth of 3.9m, about 0.2 mile E of the E end of the island; an 8.5m patch lies about 1 mile NE of the same end.

**Craggy Island from S**

Rocks, with depths of less than 1.8m, and **Craggy Rock**, with a depth of 5.2m, lie about 1 mile E and 2.5 miles SE, respectively, of Craggy Island. The depths are irregular between these two dangers.

The dangers in this vicinity break heavily in bad weather; Craggy Island and the two dangers are surrounded by tide rips.

**Tides—Currents.—**The tidal currents attain a velocity of about 2 knots in the channels between Endeavor Reef and Beagle Rock, Craggy Island, and Craggy Rock. In strong breezes there are generally heavy tide rips in the vicinity of the reefs.

## The Furneaux Group

**2.15** The Furneaux Group consists of Flinders Island, Cape Barren Island, Clarke Island, and some smaller islands, rocks, and shoals. The group extends from The Sisters, off North Point, the N end of Flinders Island, for about 60 miles SSE to the dangers off Moriarty Point, the SE end of Clark Island.

The Sisters have rather uneven surfaces, with small patches of light scrub, and are heavily grassed. The depths are very irregular around The Sisters and the N part of Flinders Island.

The Sisters are visible from 30 miles in clear weather.

**West Sister Island** (39˚42'S., 147˚55'E.) is almost divided in the middle by a deep valley; the W part is 165m high, while the E part is 197m high. An 8.2m depth lies about 1 mile NW of the NE end of the island, to which it is connected by a shallow sandy spit. A 5.5m shoal lies about 0.7 mile N of the E end of the island.

East Sister Island, about 2.5 miles NE of West Sister Island, is 192m high on its SW side. A rock, 0.6m high, lies close off the N end of the island; a 5.9m rocky ridge, over which there is a confused sea caused by the tide race, and a depth of 16.1m, lie about 1.2 miles W and 2.7 miles WNW, respectively, of the rock. A rock, 3m high, lies about 0.5 mile S of the middle of the S side of East Sister Island; a spit, with a depth of 2.7m, extends about 1.5 miles E of the rock.

## Flinders Island

**2.16** Flinders Island is mountainous on its W side, with the range extending from Mount Killiecranke, 317m high, about 7 miles SSW of North Point (39˚43'S., 148˚56'E.), to Strzelecki Peaks, 777m high, about 5 miles NW of Pigs Head Point, the S end of the island. The mountains are bold and abrupt on their W side, but slope gradually to the lowland on the E side of the island, which is fronted by a sandy beach. The W side of Flinders Island is fronted by several islands and islets, under the E side of which vessels may find shelter from W winds.

**Flinders Island—West coast.—Bligh Point** (39˚45'S., 147˚51'E.), about 5 miles WSW of North Point, is bordered by rocks. A shoal, with a least depth of 8.5m, lies about 1.5 miles SSW of Bligh Point.

Killiecrankie Bay, about 4.5 miles S of Bligh Point and SW of Mount Killiecrankie, is exposed NW, but it affords protection from SW gales, the violence of the sea being broken by Sentinel Island, 22m high, and the surrounding rocks, about 3 miles W of the bay. Only a moderate swell enters the bay, and al-though the bottom is sand, the holding ground is good. When entering and leaving this bay, a vessel should pass NE of the rocky islet, 7m high, in the middle of the entrance to the bay, in order to avoid a sunken rock lying about 0.3 mile SW of the islet.

**Cape Frankland** (39˚52'S., 147˚45'E.), the W extremity of a hilly peninsula extending from the W coast of Flinders Island, is fringed by a reef and an islet lies about 0.5 mile N of it. North West Peak, about 2.5 miles E of the cape, rises to an elevation of 332m, with a conspicuous radio mast on its summit.

Frankland Rock, about 4 miles W of Cape Frankland, is a double rock which dries 1.5m, and is steep-to except on its E side, where a bank with a depth of 12.8m, extends about 0.5 mile E.

Roydon Island and Pasco Island, mostly connected by rocks above and below-water, extend about 4 miles from the shore, about 2 miles SE of Cape Frankland. Roydon Island is 74m high, and South Pasco Island is 11m high. The channel between North Pasco Island and Mid Pasco Island is about 0.5 mile wide, with a depth of 15.5m in the fairway.

Marshall Bay, entered between the S extremity of Cape Frankland and Settlement Point, about 6.5 miles SSE, has depths of 11 to 18.3m, but affords no shelter in W winds. Marriot Reef extends about 1.2 miles SW from the NE corner of the bay.

**Settlement Point** (40˚01'S., 147˚52'E.) is hilly, abrupt, and bordered by rocks. Wybalena Island and an islet close SW lie on the NW side of a bank, with depths of less than 5m, about 0.7 mile SW of Settlement Point.

**2.17** Prime Seal Island lies with **Prime Seal Point** (40˚02'S., 147˚46'E.), its N extremity, about 3.7 miles W of Settlement Point. Its two higher hills, at the N and S ends, respectively, of the island, are 147m and 176m high. A reef, on which rocks dry 2.4m, extends about 0.7 mile N of Prime Seal Point; the reef was reported to have extended about 0.2 mile NE. Depths of less than 5.5m extend up to 0.5 mile off the NE side of the island.

Koh-i-noor Rock, about 2.5 miles SSW of the NE extremity of Prime Seal Island and about 0.2 mile offshore, is nearly awash at the SE end of a reef; an above-water rock lies at the NW end of the reef.

**Anchorage.—**There is good anchorage, in 11m, on the E side of Prime Seal Island, about 0.7 mile N of Koh-i-noor Rock and 0.5 mile offshore. Care should be taken to avoid Koh-i-noor Rock when approaching the anchorage from the S.

The reef bordering the E side of the S end of Prime Seal Island was reported to have extended about 0.3 mile SE.

Low Islets consist of three islets which lie on a reef extending from 0.7 mile to 2 miles S of the S extremity of Prime Seal Island. The N islet is 9.1m high, and the S islet is 12.5m high. An 11m patch lies about 0.7 mile SE of the S islet.

Safe passage, about 0.5 mile wide, with depths of 24 to 28m in the fairway, lies between the S end of Prime Seal Island and the N end of Low Islets.

Swires Patch, with a depth of 9.1m, lies about 1.7 miles NW of the S end of Prime Seal Island.

Myrmidon Rock, with a depth of 2.7m, lies about 1.7 miles W of Prime Seal Point.

A clear channel, with a depth of not less than 11.9m, lies between Prime Seal Island and the islets off the W side of Flinders Island. A 10.9m patch lies about 1 mile SW of Wybalena Island.

Arthur Bay is entered between a point about 2 miles ESE of Settlement Point and Blue Rocks Point (40˚06'S., 147˚57'E.), a low peninsula, about 4.5 miles farther SSE. Brougham Sugarloaf, 451m high, is the summit of a range of hills backing the bay.

Chalky Island, 24m high, lies about 3 miles W of Blue Rocks Point. Islands and rocks, above and below-water, extend to about 3 miles S of Chalky Island. Isabella Island, 9.8m high, lies about 2.5 miles SE of Chalky Island. Chalky Island and the above islands and rocks lie on or near the edge of the coastal bank, with depths of less than 5m.

Between Blue Rocks Point and **Trousers Point** (40˚13'S., 148˚01'E.), about 8 miles SSE, are Parrys Bay and Fotheringate Bay, separated by a drying sandspit on the outer end of which is Big Green Island, about 2 miles offshore. Parrys Bay is fronted by a drying sandbank extending up to 1 mile offshore in its N part. An airfield lies about 2 miles E of Blue Rocks Point. Parrys Rock lies near the N end of a reef extending about 1 mile N of Big Green Island.

**Anchorage.—**There is anchorage, in 7.3m, about 0.3 mile off the SE side of Big Green Island.

East Kangaroo Island (Kangaroo Island), 30m high, lies about 2.5 miles W of Big Green Island. It is steep-to on its W side, except for a rock, which dries 2.4m, about 275m off its NW end. Two above-water rocks lie about 0.5 mile S of its S point. A rock, 4.6m high, lies at the S end of a group of above-water rocks extending about 1 mile N of the island.

A light is shown from the SE extremity of East Kangaroo Island.

**Anchorage.—**Anchorage can be taken, in a depth of 12.8m, about 0.5 mile off the NE side of East Kangaroo Island.

## The Chappell Islands

**2.18** The Chappell Islands consist of three islands and numerous islets and rocks lying from 5 to 12 miles SW of Trousers Point (40˚13'S., 148˚01'E.), in the W approach to Franklin Sound.

**Goose Island** (40˚18'S., 147˚48'E.), the W island, is 16.5m high in its N part and consists of granite boulders. Little Goose Islet lies close off its NW end. A light is shown near the SE end of Goose Island.

**Anchorage.—**Anchorage may be obtained, in about 18.3m, sand, E of the middle of Goose Island. This anchorage is good during E winds, but being so close to the shore it is unsafe should the wind shift to the SE.

Badger Island, the largest of the Chappell Islands, is flat, sparsely covered with timber, and 33m high at its NE end. A conspicuous granite boulder stands above Unicorn Point, the SW extremity of the island. A deep channel, about 1.5 miles wide, separates Badger Island from Goose Island.

A rocky spit, with a depth of 2.7m near its outer end, extends about 1.5 miles N from the NW end of Badger Island. Ena Shoal, with a depth of 6.1m and steep-to, lies about 2.5 miles NNE of the NW end of Badger Island.

Little Badger Islet, 5.2m high, lies on the N side of a reef which extends about 0.5 mile E of the E end of Badger Island. A chain of rocks, drying 1.8m, lies on the N edge of a bank with depths of less than 11m extending about 0.5 mile NE and NW of the islet. A shoal, with a depth of 7m, sand and shell, lies about 1 mile E of the islet.

A rock, with a depth of less than 1.8m, was reported (1960) about 0.2 mile SE of the SE end of Badger Island.

Beagle Island, 6.4m high, and another islet close N, lie about 1.2 miles SE of the SE end of Badger Island, on a bank with depths of less than 9.1m. A chain of above-water rocks lies on the NW edge of the bank, about 0.5 mile N of Beagle Island.

Rochfort Rock, with a depth of 1.8m, lies about 1 mile SSW of Beagle Island; the sea breaks over it during W winds near LW.

**Anchorage.—**Good anchorage may be obtained, in about 11m, E of Badger Island, about 0.7 mile SSW of Little Badger Islet.

Double Rock, 10.4m high, and Boxen Island, 6.7m high, lie about 3 and 4 miles SE, respectively, of Unicorn Point, the SW

extremity of Badger Island, near the N and S ends, respectively, of a bank, with depths of less than 9.1m. They are almost connected by rocks and foul ground, with which Boxen Island is surrounded. A drying rock lies about 0.3 mile NNW of Double Rock.

**Mount Chappell Island** (40˚16'S., 147˚56'E.), about 0.7 mile NE of Badger Island, rises to a rounded summit, 199m high. A rock, which dries 0.9m, lies midway between Badger Island and Mount Chappell Island.

A spit, with a depth of 9.1m over its outer end, and on which there are several above-water rocks, extends about 0.4 mile W of the SW end of Mount Chappell Island. A bank, with depths of less than 5.5m, and on which there are above-water rocks and drying reefs, extends about 1.2 miles NNE from a position about 1 mile WNW of the SW end of Mount Chappell Island.

A rock, which dries 2.1m, and an above-water rock lie on a bank with depths of less than 5.5m about 1 mile WNW of the N end of Mount Chappell Island.

Ann Islet and a rock, 4.6m high, each lie on banks, with depths of less than 5.5m, about 1.2 miles NNW and 0.5 mile ENE, respectively, of the N end of Mount Chappell Island.

Bet Shoal, with a depth of 4m, and which breaks in W weather, lies about 1.5 miles ENE of the N end of Mount Chappell Island.

## Franklin Sound

**2.19** Franklin Sound, between Flinders Island and Cape Barren Island, is about 4 miles wide. It is encumbered by islands and shallow banks, between which there are tortuous and narrow channels available only to vessels with local knowledge.

**Kilt Shoal** (40˚14'S., 148˚01'E.), with a depth of 3.4m and with a depth of 6.7m about 0.5 mile SE, lies about 1.5 miles S of Trousers Point, on the N side of the W entrance to Franklin Sound.

Entrance Rock, with a depth of less than 1.8m, and an 8.8m patch, lie about 0.7 mile and 1.5 miles S, respectively, of Kilt Shoal.

A 5.2m patch lies close off **Pig Head Point** (40˚16'S., 148˚07'E.), the S extremity of Flinders Island.

Oyster Rocks (Isabella Islets), two in number, the NE, 11m high, lie about 2.5 miles WSW of Pig Head Point. These islets lie on a sandbank which dries in places and extends about 2 miles WNW and 5 miles E from the islets.

Little Anderson Islet, bold and steep-to on its N side, lies on this bank about 1 mile S of Pig Head Point, and is connected to Anderson Island (Woody Island), 58m high, close S, by a drying sandbank.

Tin Kettle Island, 31m high near its center, lies about 0.7 mile E of Anderson Island, to which it is connected by a flat which dries in places. A rock drying 1.5m lies at the outer end of a reef extending about 0.4 mile NE of the E end of Tin Kettle Island. A spit, with a least depth of 1.8m, extends about 1.5 miles W from the drying rock, and depths of less than 9.1m extend about 1 mile farther W.

**Long Island** (40˚22'S., 148˚00'E.), on the S side of the W entrance to Franklin Sound, is bordered by rocks and is connected at its E end to Cape Barren Island, about 0.5 mile SE. The island is 50m high in its N part where there is a conspicuous granite boulder, and near its W end, 30m high, is another granite boulder.

Dough Bay Islet (Doughboy Islet) lies about 1 mile ENE of Long Island. From Ned Point, about 1.2 miles farther ENE, rocks extend N nearly to a rocky islet, about 0.5 mile offshore; a rock, with depths of less than 1.8m, was reported (1972) about 0.2 mile NW of the islet.

The S shore of Franklin Sound, from Long Island to Apple Orchard Point, about 9 miles ENE, is mostly fronted by banks with depths of less than 5.5m.

**2.20 West Entrance Channels.—**A bar, with depths of 3.7 to 6.7m, lies across the entrance of the N or main channel between the outer end of the spit extending WNW from Oyster Rocks and the SW point of Flinders Island. Pig's Head Point, bearing 090˚, and open N of the summit of **Vansittart Island** (40˚16'S., 148˚18'E.) leads over the bar in a least depth of 6.7m. After clearing the bar, ease S to pass about 0.5 mile N of Oyster Rocks to clear several depths of 4.9 and 5.2m. Then steer E to pass about 0.3 mile off Pigs Head Point, and N of the spit N of Tin Kettle Island.

A bar, with depths of less than 1m, lies about 2 miles WNW of Ned Point at the entrance of the S channel. The channel then leads N of the rocks off Ned Point, and S of the spit extending about 0.7 mile S of Anderson Island, and then S of Tin Kettle Island where it joins the N channel.

**Little Dog Island** (40˚15'S., 148˚18'E.), 36m high, and Great Dog Island, about 1 mile E, front a shallow bay in the NE part of Franklin Sound. A conspicuous hill, 49m high, rises near the center, and a prominent flat-topped hill, 75m high, stands near the W end of Great Dog Island. A spit, with depths of less than 5.5m and a least depth of 0.6m, extends about 1.5 WSW from the W end of Little Dog Island; a rock, 0.9m high, lies about 0.2 mile S of its S extremity. A rock, 0.6m high, lies about 0.7 mile SE of the SW end of Great Dog Island; a bank, with depths of less 5.5m, extends about 0.4 mile ESE of the rock. Another bank, with depths of less than 5.5m, extends nearly 3.5 miles WSW from a position about 0.4 mile SE of the 0.6m high rock.

A direction light is shown from a beacon on the NE shore of Great Dog Island. A beacon stands 180m WSW. When aligned, and with the middle of the white sector bearing 258˚, lead through the sound between the shoals NE of Vansittart Island and Flinders Island.

**Vansittart Island** (40˚16'S., 148˚18'E.) rises to a conspicuous broad summit, 167.6m high. A 5.2m patch lies about 0.7 mile W of the W end of Vansittart Island. A 5.5m patch lies about 0.2 mile S of the S end of Great Dog Island.

Briggs Islet, 8.8m high, lies at the SW end of a bank, with depths of less than 5.5m, about midway between Great Dog Island and the N end of Vansittart Island. A rock, with a depth of less than 1.8m, lies about 0.2 mile NNW of Briggs Islet.

Pot Boil, with a depth of 0.6m, and Vansittart Shoals, with depths of 1.2m, lie on a spit with depths of less than 5.5m, extending about 3.7 miles E and then 5.5 miles S from the SE point of Flinders Island. The sea breaks heavily on this spit in E winds and the depths over it are subject to change.

A bank, with depths of less than 5.5m, which dries in places on its N edge and over which the sea breaks heavily, extends

about 4 miles E from the N end and 3 miles E from the E side of Vansittart Island.

From a position about 1 mile NW of the E end of Tin Kettle Island, the main channel divides. The main channel leads SE between the drying rock off the E end of Tin Kettle Island and the W end of the bank which extends WSW from a position about 0.4 mile SE of the 0.6m high rock off the S side of Great Dog Island. The main channel joins the S channel SE of Tin Kettle Island. Then the main channel leads NE towards Briggs Islet, which may be passed on either side.

From a position about 1 mile NW of the E end of Tin Kettle Island, another channel extends about 4 miles ENE towards the S end of Great Dog Island, bounded N by the spit extending SW from Little Dog Island, and S by the bank which extends WSW from a position about 0.4 mile SSE of the 0.6m rock off the S side of Great Dog Island. The channel passes S of this rock and leads in a SE direction through a narrow channel between shoal banks to join the main channel.

**2.21 East Entrance Channel.—**The E entrance channel to Franklin Sound lies between Vansittart Shoals and the bank extending from the E side of Vansittart Island. The channel had a depth of 7.3m in the fairway in 1968, except for a shoal with a depth of 5.2m at its N end. The depths in the channel are liable to change after E winds.

**Tides—Currents.—**At the E entrance of Franklin Sound the flood currents meet, one coming from NNE and the other from SE. The flood current sets W through the sound, and then about WNW on the N side and WSW on the S side of the Chappell Islands. The ebb current sets in the opposite direction. In the sound the tidal currents attain a rate of from 2 to 2.5 knots.

**Anchorage.—**Anchorage may be obtained, in 8.2 to 9.1m, S of Tin Kettle Island.

**Caution.—**Vessels drawing in excess of 1.8m should not use the entrance marked by the white sector of Pot Boil Direction Light except in calm directions.

## Flinders Island—East Coast

**2.22** The E coast of Flinders Island, in contrast to its W coast, is generally low and fronted by a sandy beach.

Holloway Point, marked by a light, lies about 1.2 miles SE of North Point. Northeast Rock, with a depth of less than 1.8m, lies close off Holloway Point.

Beagle Spit, with depths of less than 11m and a least depth of 3m about 2 miles within its outer end, extends about 7.5 miles E from a position about 2.5 miles SE of Holloway Point. Depths of less than 18.3m extend about 3 miles farther E from the outer end of the spit.

The Patriarch Hills, three remarkable peaks, rise from low sandy land behind Sellar Point, the E extremity of the island. The peaks are separated from the mountains W by Heather Valley. The NE and highest peak, 235m high, lies about 4.5 miles W of Sellar Point; it has a sharp appearance and shows up well from the SE.

**Babel Island** (39˚57'S., 148˚20'E.), about 0.7 mile ENE of Sellar Point, rises to a flat-topped peak, 196m high, and a remarkable pyramidal hill, 136m high, lies near its W end. Foul ground was reported (1983) about 8 miles NNE of Babel Island. Cat Islet, 32m high and marked by a light, lies close E of Babel Island. Storehouse Islet, 16.8m high, lies close S of Cat Islet.

Several small rocks lie off the N side of Sellar Point. A rock, 1.2m high, and a rock, which dries about 2.1m, lie about 1.2 miles and 0.5 mile NW, respectively, of the W end of Babel Island. About 2 miles W of Sellar Point and 1 mile offshore, are two small groups of above-water and sunken rocks.

**Tides—Currents.—**North of Babel Island the flood current sets N and the ebb current sets S, parallel to the coast; they are generally regular, especially near the shore. South of Babel Island, the tidal currents are weak and irregular.

**Anchorage.—**With W winds, there is anchorage, over a sandy bottom, either N or S of the sandy spit connecting Babel Island with Flinders Island, taking care to avoid the above-described rocks. With winds E of N or S, no vessel should anchor in this neighborhood.

**Caution.—**Minnie Carmichael Shoal, about 11 miles ESE of the summit of Babel Island, was reported to have a depth of 6.4m.

A rock, known locally as Lawrence Rock, the position of which is doubtful, was reported to lie about 8 miles S of Minnie Carmichael Shoal.

An obstruction was reported to lie about 10.5 miles S of Minnie Carmichael Shoal.

In view of the doubtful nature of the above-mentioned reported dangers, as several vessels are reported to have been wrecked on detached dangers off the E coast of Flinders Island when seeking shelter from W gales, mariners are urged to use caution.

## Cape Barren Island

**2.23** Cape Barren Island is formed of granite peaks, the highest of which is **Mount Munro** (40˚22'S., 148˚07'E.), 716m high, round-topped and timbered, about 6.5 miles ENE of Cape Sir John, the SW extremity of the island. Mount Kerford, 501m high, a prominent peak, rises about 5.5 miles W of Cape Barren, the E extremity of Cape Barren Island.

**Cape Sir John** (40˚25'S., 147˚59'E.) is backed by a conspicuous round-topped hill, 162m high, about 1 mile NNE of it. The coast for about 2 miles N of the cape is rock-bound and foul in places up to 0.5 mile offshore. A rock, 2.1m high, from which foul ground extends about 0.5 mile NW and SW, lies about 2 miles NW of Cape Sir John. Another rock, 2.1m high, lies about 0.7 mile SW of the cape.

Thunder and Lightning Bay, entered between Cape Sir John and a point about 1.2 miles ESE, has a rock, 1.8m high, midway between its entrance points. A conspicuous boulder stands on the summit of a 239m hill, about 1 mile NE of the head of the bay. Yellow Rock, 2.4m high, and Key Island, 17.7m high, lie about 1.2 miles W and 0.2 mile SE, respectively, of the E entrance point of the bay.

Numerous rocks extend up to 0.2 mile offshore of the coast between Key Island and a point about 3 miles ESE. Malms Rock, which dries, lies about 0.3 mile S of the latter point.

**Wombat Point** (40˚27'S., 148˚08'E.) lies about 2.5 miles E of Malms Rock; close S of the point is a granite islet, 23m high, with an above-water rock about 0.1 mile E.

Sloping Point lies about 4 miles E of Wombat Point, with Battery Islet, about 6.1m high, midway between the points. A

rock, awash, lies about 0.1 mile S of Sloping Point, with an above-water rock closer inshore.

Kent Bay is entered between Sloping Point and Passage Point, about 5.5 miles E. The bay is encumbered with shoals, the outermost of which is a sandy shoal with a least depth of 0.6m lying across the entrance, from about 1.7 to 3.7 miles E of Sloping Point.

Cone Point, about 2 miles E of Passage Point, is so named from two remarkable cone-shaped rocks on it.

A headland, marked by conspicuous sandhills and separating two bays, lies midway between Cone Point and Cape Barren, about 5 miles NE.

**2.24 Cape Barren** (40˚26'S., 148˚29'E.), the E extremity of Cape Barren Island, is a rocky point, with numerous hillocks over it. Gull Islet, rocky and 12.2m high, lies in the middle of foul ground extending about 1 mile E of the cape. Gull Rock, 3.7m high, lies on the outer part of the foul ground at the S end of a reef of above-water and sunken rocks extending about 0.5 mile N of Gull Rock; the reef is steep-to on its E side, but there are strong tide rips near it. A light is shown from the SE side of Cape Barren.

An obstruction, with a depth of 7.3m, was reported (1973) about 3.2 miles ESE of Cape Barren. A bank, with a depth of 12.2m, lies about 1.2 miles SE of the cape.

Harley Point, about 4 miles NNW of Cape Barren, has several above-water and sunken rocks extending about 0.5 mile SE of it. Flat Rock, 0.9m high, lies about 0.7 mile farther SE, with a few sunken rocks extending about 0.2 mile NNW of it.

Several rocky points with intermediate sandy beaches lie between Harley Point and Puncheon Point, about 7.5 miles NW.

## Armstrong Channel

**2.25** Armstrong Channel, between Cape Barren Island and Clarke Island, is seldom used due to the numerous banks and strong tidal currents in it. A passage of sufficient width and depth for small vessels with local knowledge is swept out by the tidal currents. There was a least depth of 6.4m in the E entrance between the S extremities of Forsyth Island and Passage Island.

The W entrance to Armstrong Channel is obstructed and divided into two passages by Preservation Island, islets, and rocks; the S passage is wider and straighter.

**Night Islet** (40˚29'S., 148˚01'E.), the W islet, lies about 4 miles SSE of Cape Sir John and is 14m high. Above-water and sunken rocks extend about 0.7 mile NE of Night Islet. Little Night Islet lies about 0.5 mile S of Night Islet. A spit, with depths of 9.1m over its outer part, extends about 0.7 mile SE of Night Islet. An 11m patch lies about 0.7 mile ESE of Little Night Islet. A 15.8m shoal lies about 4.5 miles SW of Little Night Islet; overfalls occur about 3 miles SE of this shoal.

Preservation Island, 25m high, lies with its NW extremity about 1.5 miles ENE of Night Islet. Islets and rocks extend about 0.5 mile NW from its NW end, and a spit, with depths of less than 5.5m, extends about 2 miles E from its E side. A 5.2m patch lies about 0.5 mile E of the SE extremity of Preservation Island.

Rum Islet, close off the S end of Preservation Island, has a reef extending about 0.2 mile S of it. A rock, with a depth of 3.4m, and a 5.8m patch, lie about 0.4 mile and 1 mile E, respectively, of its S end.

**Anchorage.—**Hamilton Road affords anchorage, in 7.3m, about 0.3 mile E of the SE end of Preservation Island; there are patches with depths of 5.5m in the vicinity. After a continuance of heavy W gales, a long swell rolls around the S end of Rum Islet; this swell does not gradually increase, but sets in suddenly and may compel a vessel to get under way.

A bank, with a least depth of 4.3m, known locally as Preservation Bank, lies between positions about 1 mile SSW and 0.7 mile S, respectively, of Wombat Point.

Eclipse Rock, with a depth of 3m, around which there is always a confused sea, lies about 0.5 mile W of the W extremity of Clarke Island, and a rock, with a depth of less than 1.8m, lies about 1 mile N of the same extremity.

The N shore of Clarke Island, W of Kangaroo Bay, is fronted by a bank with depths of less than 5.5m, extending up to 0.7 mile offshore.

The better side of Armstrong Channel lies along the Clarke Island shore, care being taken to avoid the above bank. Then the channel lies between the W entrance of Kangaroo Bay and Middle Bank, which, with a least depth of 0.6m, lies between positions about 1.2 miles S and 1.7 miles SE of **Battery Islet** (40˚27'S., 148˚11'E.).

Seal Rocks, which dry 2.4m, extend about 0.2 mile N of Seal Point, the NE extremity of Clarke Island. The channel lies between Seal Point and Sloping Point, about 1.2 miles NE.

Armstrong Channel then leads about 3.5 miles E, passing N of a shallow sandbank, parts of which dry and which extends from the NE side of Clarke Island to Forsyth Island, about 3 miles E and 30m high. The sandy shoal lying across the entrance to Kent Bay lies in the center of this part of the channel which terminates S in a passage between Forsyth Island and Passage Island, 54m high, about 0.5 mile E. The latter passage is narrow and lies between the banks, with depths of less than 5.5m, extending from these islands; at the S end is a bar, with a least depth of 6.4m and over which the sea breaks, between the S extremities of the islands. Rocks, with depths of less than 1.8m, extend about 0.3 mile SE from the SE end of Passage Island, off which there are strong tide rips.

The narrow passage between Passage Island and Passage Point should only be used in case of necessity, as the tidal currents attain velocities of from 5 to 6 knots. Several above-water rocks lie about 0.2 mile N of the N end of Passage Island, and a rock, which dries 0.6m, lies in mid-channel.

A rock, which dries 0.9m and over which the sea breaks heavily, lies about 1 mile SW of the S end of Forsyth Island.

## Clarke Island

**2.26** Clarke Island, the S island of the Furneaux Group, rises to a peaked hill (40˚31'S., 148˚09'E.), 206m high, near its NW side. A flat-topped hill, 160m high, rises in its SW part. The S coast of the island is backed by a plateau from which rise two conical hills, the higher near the middle of the plateau, from where the land falls gradually to Seal Point.

Snug Cove, entered between **Lookout Head** (40˚34'S., 148˚07'E.) and a point about 1.7 miles NNW, has several islets

and rocks off its SE side, and although deep, it cannot be recommended. Lookout Rock, 18m high, lies on a bank with depths of less than 18.3m, about 0.7 mile NW of the NW end of Lookout Head; an above-water rock lies about 0.3 mile N of Lookout Rock, on the N end of the bank. Napper Rock, two rocks which dry 1.8m, lie between Lookout Rock and the NW end of Lookout Head.

A rock, 0.6m high, lies about 0.3 mile SE of the SE end of Lookout Head, and is the outermost of rocks extending SE of the point. Rocks, which dry, lie about 0.5 mile E of the 0.6m rock.

Depths of less than 9.1m extend about 0.3 mile S from the S extremity of Clarke Island.

Moriarty Bay, N of Moriarty Point, the SE extremity of Clarke Island, has bad holding ground, over an irregular rocky bottom.

**Off-lying dangers.—Moriarty Rocks** (40˚35'S., 148˚17'E.) consist of two rocks, 7.6 and 6.1m high, lying about 3.2 and 3.7 miles E, respectively, of Moriarty Point. They lie on a bank with depths of less than 18.3m, extending from 1 mile SE to 9 miles E of Moriarty Point. Moriarty Bank, marked by heavy breakers, extends about 2.5 miles WSW from the NW rock. East Bank, with a depth of 1.5m, and another bank, with a depth of 3.4m, lie about 2 miles SE and one mile SSE of the same rock. Depths of less than 11m extend about 2 miles E of East Bank. The sea breaks heavily over East Bank and the 3.4m bank.

**Mount William** (40˚55'S., 148˚11'E.), near the NE coast of Tasmania, bearing 204˚, leads E of the above dangers, and the S extremity of Clarke Island, bearing more than 290˚, leads S of the dangers.

Low Islets, 6.1m and 4.6m high, lie on a shoal, with depths of less than 11m, which extends about 1.7 miles SW and 0.7 mile NW of them. Above-water rocks and a sunken rock lie at the NE end of this shoal. A rock, which dries 1.2m, lies about midway between Low Islets and the E side of Clarke Island.

**Caution.—**The whole area between the E side of Clarke Island, Moriarty Bank, and Passage Island is either foul ground, or the strong tidal currents cause such a race and the sea to break so heavily as to make this vicinity dangerous.

## Wilson Promontory to Cape Howe

**2.27** The coast between South East Point (Wilson Promontory) (39˚08'S., 146˚25'E.) and entrance to Gipps Land Lakes (37˚53'S., 147˚58'E.), about 105 miles NE, is low and consists mostly of hummocks less than 30m high, except for the high land on the E side of Wilson Promontory. Then to Cape Howe (37˚30'S., 149˚58'E.), about 100 miles farther ENE, the coast is higher, rising in places to an elevation of about 91m. Numerous mountains and hills are inland, many of these behind the E part of this coast forming good landmarks due to their close proximity to the coast.

There are few anchorages for deep-draft vessels on this coast. The principal ones are Waterloo Bay and Refuge Cove, on the E side of Wilson Promontory.

An area to be avoided is centered about 40 miles SE of Lakes Entrance, covering a major offshore oil and gas production field.

## South East Point to Corner Inlet and Port Albert

**2.28 South East Point** (39˚08'S., 146˚25'E.) was previously described in paragraph 2.8 with Wilson Promontory.

South Peak, 379m high, rises about 0.7 mile NW of South East Point. An islet, almost connected to the shore by boulders, lies about 1 mile NNE of the point.

Waterloo Bay is entered between Waterloo Point, about 2.5 miles NNE of South East Point, and Cape Wellington, about 2.2 miles farther NE. A light is shown from Waterloo Point. The bay has a depth of 26m in its center, decreasing gradually to 11m about 0.2 mile off its head, but increasing towards its outer points. The SW shore of the bay forms the E end of the valley crossing the promontory, and makes a conspicuous break between the high lands of Boulder Range and Wilson Range.

**Anchorage.—**The best anchorage is in about 22m, about 0.4 mile from the SW shore. Small vessels bound W and met by a SW gale may anchor close inshore in a small cove under Waterloo Point. The holding ground is good, but the anchorage is not recommended, because it's immediately under the high land of Wilson Promontory and exposed to the swell from both sides of Bass Strait. The bay, from 0.5 mile N of Waterloo Point, is open to severe W winds that sweep through the valley at the head of the bay.

**Cape Wellington** (39˚04'S., 146˚29'E.), a hilly headland, 78m high at its SE extremity, rises to an elevation of 135m about 0.5 mile inland, and to Kersop Peak, 222m, its highest part, about 1 mile inland. A stone cairn stands on the extremity of the cape, and on Kersop Peak.

Cape Wellington has been reported to give good radar returns at 18 miles.

**Tides—Currents.—**Off Cape Wellington the flood tidal currents appear to meet and set in opposite directions, one portion of the current which comes from NE turning and setting along the shore N, while the outer portion of the same current sets round the promontory S and W. The ebb current from the SW sets in an opposite manner. These conditions cause a considerable tidal rip and race off Cape Wellington.

Refuge Cove is the central of three indentations lying between Brown Head, about 1.3 miles N of Cape Wellington, and Horn Point, 40m high, about 1 mile farther N. The cove is easily identified, being midway between Kersop Peak and Horn Point, and from its having the first sandy beach which opens N of Cape Wellington.

The entrance to the cove, S of Hobbs Head, is about 275m wide, with depths of 14.6m in it. The depths decrease gradually from 7.3 to 5.5m close inshore. A round-topped hill with a wooded summit, 61m high, surmounts Hobbs Head. A light is shown on the E side of the S entrance to Refuge Cove.

**Anchorage.—**Refuge Cove is the only anchorage on the W side of Wilson Promontory sheltered from the E. The anchorage is in its S part.

**2.29 Sealers Cove** (39˚01'S., 146˚27'E.) is entered about 1.7 miles WNW of Horn Point. There are depths of 7.3 to 9.1m in the entrance to the cove, which is about 0.6 mile wide; the depths decrease to 5.5m about 0.2 mile within its entrance. A heavy swell often rolls into the cove.

Sealers Cove Light is shown about 0.7 mile E of the N entrance point of Sealers Cove.

The coast from the N end of Sealers Cove to the S end of Five Mile Beach, about 1.7 miles NNW, is bold and steep-to. The latter beach extends about 4 miles NNE, and may be approached to a distance of about 0.7 mile in depths of 9.1 to 11m. The beach consists of reddish-colored sand and is backed by swampy ground extending about 2 miles W to the Vereker Range.

Rabbit Rock, 15.2m high, lies about 0.2 mile SE of Monkey Point, a bold point about 0.7 mile ENE of the N end of Five Mile Beach.

**Rabbit Island** (38˚55'S., 146˚30'E.), 59m high, bare of trees and covered with high grass, lies about 1 mile E of Monkey Point. It is an excellent mark for vessels proceeding N to Corner Inlet.

**Anchorage.—**There is good anchorage in all but SE or E gales, in 8.2 to 9.1m, about 1 mile NE of Rabbit Island. Coasters bound W will find this a convenient anchorage during SW gales.

**2.30 Lighthouse Point** (38˚51'S., 146˚29'E.), about 4.5 miles NNW of Rabbit Island, is 11m high, heath-covered, with a conspicuous bare granite face, above which is a beacon, 4.9m high. A light is shown on the point.

Mount Roundback, 313m high, rises about 2.5 miles SSW of Lighthouse Point. Mount Hunter, a double-peaked wooded mountain, 351m high, lies about 3.5 miles N of Mount Roundback; a conspicuous peak, 237m high, lies on the E spur of Hunter Range, about 0.5 mile E. Mount Margaret, 218m high, lies about midway between Mount Roundback and Mount Hunter.

Entrance Point, the SW entrance point of Corner Basin, lies about 3.7 miles N of Lighthouse Point, and is a low tree-covered point; a beacon, 4.9m high, stands on the point. Mount Singapore, the N point of Wilson Promontory, lies about 1 mile W of Entrance Point; it is cone-shaped and 144m high.

**2.31 Off-lying islands and dangers.—**The Seal Islands (Direction Islands) consist of a group of islands, islets, and rocks lying from about 6 miles E to 9 miles ESE of Rabbit Island.

**Cliffy Island** (38˚55'S., 146˚42'E.), the SE island of the group, is 44m high, with rocks awash extending about 0.1 mile off its NE end. A light is shown from the S side of the island; the lighthouse is in communication with Wilson Promontory. Cliffy Island has been reported to give good radar returns up to 18 miles.

Rag Island, 29m high, lies about 1.2 miles WSW of Cliffy Island. Rocks, awash, extend about 0.1 mile W and 0.3 mile NW of the island, and two conspicuous rocks, about 6.1m high, lie about 0.2 mile E of the island.

Notch Island, 37m high and steep-to, lies about 0.7 mile N of Rag Island. It has two hills on it and the valley between them gives it a notched appearance.

Seal Island (Direction Island), nearly 1 mile NW of Notch Island, is 47m high and covered with tufts of coarse grass. Two rocks lie about 0.1 mile and 0.4 mile NW, respectively, of Seal Island; the outer rock is 2.4m high, with a rock awash close N; the inner rock has a rock awash close NW of it.

White Rock, 10m high, lies about 1.2 miles NNW of Seal Island. A rock, with a depth of 5.5m, lies close S of it and a rock, with a depth of 5.8m, lies about 0.2 mile NW.

## Corner Inlet and Port Albert

**2.32** The ports of Corner Inlet and Port Albert include all waters of Corner Inlet, Corner Basin, and Port Albert, together with the navigable rivers and creeks flowing into them, NW of a line drawn 050˚ from the summit of **Rabbit Island** (38˚55'S., 146˚30'E.) for 22 miles, and then N to the coast.

Corner Inlet leads into Corner Basin and lies between the E side of Wilson Promontory, N of Rabbit Island and Snake Island (La Trobe Island), with Townsend Point, its S extremity, about 3 miles E of Entrance Point. About 2 miles within the entrance to Corner Basin, the waters branch into several channels intersecting extensive sand and mud flats which mostly fill the basin.

Snake Island (La Trobe Island), separating Corner Inlet from Port Albert, is low, but the trees on it give it an apparent elevation of 12.2 to 18.3m.

Port Welshpool and Port Franklin, in the NE and NW corners, respectively, of Corner Basin, are approached by Lewis Channel and Franklin Channel, respectively; they are the main ports for the Bass Strait fishing fleets. The town of Port Albert, at the head of Port Albert, about 11 miles E of Port Welshpool, is also a port for the Bass Strait fishing fleets.

**Tides—Currents.—**The tidal rise at Rabbit Island is 2m at MHHW and at MLHW.

The tides in Port Albert are generally influenced by the winds, and no reliance can be placed on calculated times of HW during unsettled weather.

Strong W to SW winds cause the incoming tidal current to run from 1 hour to 1 hour 30 minutes after, and E winds cause it to cease running 40 minutes before the predicted time of high water.

Tidal currents on the NE side of Corner Inlet set with considerable force, sometimes at a rate of over 2 knots.

## Corner Inlet (Welshpool) (38˚51'S., 146˚34'E.)

World Port Index No. 53840

**2.33 Entrance Channel.—**The entrance to Corner Inlet should not be attempted without local knowledge. The channel lies between sandbanks, with depths of less than 5.5m. The seaward part of the SW bank lies about 4 miles NW of Rabbit Island; it dries in places close to its NE edge between positions 0.7 to 2 miles SE of the entrance point. The NE bank extends about 6 miles SE from Bentley Point, which lies about 1 mile ENE of the entrance point; the bank then extends about 1.5 miles W.

The approach to this channel, between the outer ends of the above banks, is from the E. There are depths of 5.5m on the line of the directional light in the approach. However, in 1985, depths of 5m existed 50m N of the edge of the white sector between Buoy No. 1 and Buoy No. 3 and close SW of the line joining Buoy No. 3 and Buoy No. 5. Then the channel leads NW with ample width and increasing depths between the banks into Corner Basin.

The sea breaks at times on the banks at the approach to the channel, but rarely in the approach itself, which, in heavy weather, can be located between the breakers on either side. On the NE bank, between the channel and Bentley Harbor, the sea breaks heavily over the W 3 miles of that bank.

The white sector of a directional light shown from Lighthouse Point Light leads to the entrance channel.

**Port Welshpool.—**Lewis Channel, the E channel on the N side of Corner Basin, curves about 4 miles N and E, with a least depth of 5.2m to Port Welshpool Jetty. The channel is marked by lighted and unlighted beacons. Above the pier, the channel is marked by lighted buoys. In 1985, the least depth between No. 1 Lighted Beacon and No. 2 Lighted Beacon was 4.3m. A depth of 4.4m could be carried into the channel by passing 50m E of No. 2 Lighted Beacon.

Port Welshpool Pier has a berth, 150m long on its S side, with depths of 6.0m alongside; there is a berth 110m long on its N side, with depths of 4.6 to 6.6m alongside.

Port Welshpool Jetty, with a T-head, lies about 0.7 mile E of Port Welshpool Pier. In its outer face is a berth, 150m long, with depths of 3 to 6m alongside. The channel between the jetty and pier has a least depth of 2.1m. A boat harbor is bounded on the W by a breakwater and on the E by the Port Welshpool Jetty.

Franklin Channel is entered about 2 miles NW of Entrance Point, between a shoal with a depth of 1.8m on the S side, and the E end of a drying sandy ridge extending 3.2 miles W on the N side. The channel extends about 5 miles W and then branches into three minor channels. The N branch extends N and NW for about 4 miles to the entrance to the Franklin River, where it is shoal.

Benison Channel, a blind channel, and Middle Channel lie in the SW part of Corner Basin.

**Anchorage.—**Bentley Harbor is bounded N by Bentley Point, located about 2.5 miles WNW of Townsend Point, and a point about 1.5 miles NE of Townsend Point, and on the S side by the N side of the NE bank extending from Corner Inlet. The harbor is about 1 mile wide at its E end decreasing to about 0.1 mile off the coast between Townsend Point and Bentley Point. There are depths of 8m at its entrance, decreasing to 5.5m in its narrowest part. Good anchorage may be obtained by small vessels in the narrow part of the harbor with shelter from all winds.

**Mount Singapore** (38˚47'S., 146˚27'E.), bearing 276˚ and open S of Townsend Point, leads toward Bentley Harbor. When abreast Townsend Point a vessel should keep along the shore and anchor as convenient.

Anchorage may also obtained, in 11 to 26m, S of the sandy ridge on the N side of Franklin Channel.

## Port Albert (38˚40'S., 146˚42'E.)

World Port Index No. 53830

**2.34** Port Albert, one of the oldest ports in Victoria, is the main fishing port of Bass Strait. The entrance channel and bar are liable to changes in position and depths, and the buoys marking the entrance are liable to be washed away due to their exposed position. The greatest care should be exercised by vessels with local knowledge, and those without local knowledge should not attempt to enter.

**Entrance Channel.—**The main entrance to Port Albert is about 0.5 mile wide, and lies between the E extremity of Snake Island (La Trobe Island) and the SW extremity of **Clonmel Island** (38˚45'S., 146˚40'E.), Bar Bank, which dries, extends about 1 mile SSE from the E end of Snake Island. Depths of less than 5.5m extend about 0.5 mile SW, S, and E, respectively, from the outer end of the bar. A bar, with a depth of 2.5m, extends across the entrance between the E end of Snake Island and the SW extremity of Clonmel Island.

The fairway lighted buoy is moored 4 miles SSE of the W extremity of Drum Island. Another lighted buoy is moored about 2.2 miles SE of the same point.

**Inner Channels.—**Within the entrance there are two channels. The E or main channel extends about 4 miles NNE to Port Albert from the inner end of the entrance channel. It passes E of the E end of Sunday Island and W of the chain of islands extending N from the middle of Clonmel Island to Port Albert. The least depth in this channel in 1964 was 1.8m. The channel is marked by lighted and unlighted beacons.

The W channel leads round the W end of Sunday Island, and through Midge Channel off the NE end of that island, joining the E channel off the NE extremity of Sunday Island. The channel S and W of Sunday Island is unmarked. Midge Channel and the channel for about 1 mile W on the N side of Sunday Island is marked by a pile beacon on its N side and by seven piles on its S side. A three-pile beacon, 3.7m high, stands about 2.5 miles WNW of the NE extremity of Sunday Island Beacon. A jetty extends 500m N from the NE point of Sunday Island. A light is occasionally shown from its head.

Kate Kearney Entrance lies about 4.5 miles NE of the entrance to Port Arthur and at the NE end of Clonmel Island; the latter island is 4.3m high and covered with verdure. The entrance is fronted by breakers off its SW side, and a bar, with a depth of 2.4m, extends across the entrance. A shoal channel then leads W to join the E channel to Port Albert.

Shoal Inlet lies about 4 miles farther ENE, at the E end of a low, sandy island similar to Clonmel Island. Sandspits, marked by breakers, extend up to 0.7 mile seaward from its entrance points. The entrance has a depth of 0.9m and is passable by small vessels with local knowledge. A light is shown from the E side of Shoal Inlet.

**Port Albert Wharf** (38˚40'S., 146˚41'E.) is an L-shaped jetty with a berth, 120m long, on its outer face, with a depth of 2m alongside. On the inner side of the head is a berth 59m long. The Hotel Jetty, about 100m NW of the wharf, has a length of 90m long, with depths of 1 to 4m alongside. The Boat Harbor Jetty lies just NW of the Hotel Jetty. It is T-shaped with a berth of 25m in length and a depth of 3m alongside. Vessels carrying explosives should anchor in the explosives anchorage established in Corner Inlet.

**Directions.—**Vessels bound for Corner Inlet or Port Albert from the W should, after rounding Wilson Promontory, steer for Cape Wellington, which after passing, the vessel should steer with Cape Wellington bearing 215˚ astern, in line with Wilson Promontory Light, to a position about 1 mile NW of White Rock. From a position 4 miles N of Seal Island steer for Lighthouse Point Light bearing 276.5˚, passing SW of No. 3 Lighted Buoy, then alter course to 313˚ with Cliffy Island Light

astern in order to follow the buoyed main channel into Corner Inlet. Course should then be altered for Lewis or Toora Channels when abeam of Latrobe Lighted Buoy moored 1.4 miles NNW of Mount Singapore. From the E, steer to pass about 5.2 miles N of Cliffy Island, then proceed as above.

Vessels without local knowledge are recommended to proceed as above and anchor, in a depth of 20m, with the directional light bearing 275˚ until daylight, when they should proceed as above.

A vessel bound for Port Albert from the W should proceed as directed above to a position about 1 mile NW of White Rock. Then steer NNE for about 7.5 miles, passing close to Port Albert Fairway Lighted Buoy, then change course N through the outer part of Port Albert Entrance, passing close W of the lighted buoy, situated 2.5 miles SE of Drum Island Front Leading Lighted Beacon, before altering course NW and then NE into the channel leading to the berths at Port Albert.

Vessels are recommended not to approach Port Albert at night without local knowledge, but should keep a good offing until daylight, sounding frequently.

## Port Albert Entrance to Cape Howe

**2.35** From Port Albert Entrance, the coast extends about 80 miles NE to Lake Entrance. The portion of the coast between Shoal Inlet and **Red Bluff** (37˚52'S., 148˚04'E.) is generally known as Ninety Mile Beach. This coast is a continuous steep- to sandy beach, backed by lakes and low wooded ground intersected by inlets and small streams, the latter breaking through the narrow strip of sand after a heavy rainfall. Landing on Ninety Mile Beach is possible but very dangerous.

In the offing off the SW part of Ninety Mile Beach, nothing can be seen but the back ranges of mountains. These mountains extend about 27 miles SW from **Toms Cap** (38˚20'S., 146˚48'E.), 363m high, which lies about 22 miles N of Shoal Inlet.

The coast from Shoal Inlet to the town of Seaspray, at the mouth of Merriman Creek, about 25 miles NE, is nearly separated from the land behind it, which is somewhat higher and thickly wooded by fresh and salt water lagoons or ti-tree swamps. The land is low, having an elevation of about 15m on the W side of Merriman Creek, and about 7.6m E of the creek. In places between the hummocks the coast is scarcely above HW, while the waters of Lake Denison break through the coast during the floods. Apart from Buckleys Station, a group of houses close N of Seaspray and the buildings of that town, there are no objects easy of identification on this stretch of coast.

The coast from Seaspray to Lake Entrance, about 47 miles NE, is uniform and monotonous in appearance, and continues low, from 12 to 26m high, and covered with ti-trees in places. Lakes lie behind this narrow, sandy stretch of coast; the lakes are separated from each other and surrounded by thickly wooded country, much of it subject to flooding.

Deadman Hill, 64m high, rises about 11 miles N of the mouth of Merriman Creek. Two conspicuous flares, visible for a considerable distance at night, are situated about 2.2 miles SSW of Deadman Hill. Three hummocks, the SW 22m high, the middle covered with ti-trees, and the NE Stockyard Hill, 20m high, lie about 18 miles, 24 miles, and 28 miles NE, respectively, of the mouth of Merriman Creek.

**2.36** **Sperm Whale Head** (37˚59'S., 147˚43'E.), 29m high, about 7.5 miles NE of Stockyard Hill, is the NE extremity of a peninsula separating Lake Reeve from Lake Victoria.

About 7 miles W of Lake Entrance and about 3 miles inland is Metung Hill, 75m high, from which comparatively high wooded land continues to Mount Barkly at Lake Entrance, and then to Red Bluff, about 4.5 miles farther E; high ground then skirts the arms and streams of Lake Tyers, and following the line of the coast about 2 miles inland, it gives a higher appearance to the coastline, clearly marking the difference between the land E and that W of Lake Entrance.

**Mount Barkly** (37˚53'S., 147˚58'E.) lies 0.5 mile from the outer line of coast and is the most prominent object on the coast just described. It is 62m high, but the trees on it give it an apparent elevation of 71m; it forms a useful mark for making Lake Entrance.

**Caution.—**Numerous offshore oil and gas platforms, best seen on the chart, are situated in Bass Strait between Wilsons Promontory and Point Hicks, about 150 miles NE; they extend S with less concentration almost to Flinders Island and are marked by lights and fog signals. Several submerged pipelines extend offshore and terminate in lighted production platforms.

A charted area encompassing the Bass Straight Oil Fields has been designated as an Area to be Avoided; vessels of more than 200 grt should avoid the area. The main oil and gas producing field lies between 27 miles SE and 40 miles S of the Lakes Entrance. Vessels should maintain a listening watch on VHF channel 16 while in this vicinity.

A gas pipeline, best seen on the chart, has been constructed between Ninety Mile Beach and Tasmania. The N terminus is situated one mile E of Seaspray, then S into Bass Strait between the Hogan Group and Kent Group. The S terminus is situated at Five Mile Bluff which is located 5 miles E of Port Dalrymple. Gas pipelines contain flammable gas under high pressure. Any ship damaging the pipeline would face an immediate fire hazard. Mariners are cautioned not to anchor or trawl in the vicinity of the pipeline.

Surveillance operations are carried out within a radius of 40 miles of position 38˚20'S, 148˚00'E by military vessels and aircraft, which may illuminate and approach close to vessels to verify identification.

An IMO-approved Traffic Separation Scheme lies in the waters SE of the Area to be Avoided; two light floats mark the E and W terminus of the charted Traffic Separation Zone. Vessels are cautioned that Rule 10 of the International Regulations for Preventing Collisions at Sea, 1972 (COLREGS 72) applies to vessels utilizing the Traffic Separation Scheme, and that vessels not using a Traffic Separation Scheme shall avoid it by as wide a margin as is practicable.

**2.37** **Lakes Entrance** (37˚54'S., 147˚58'E.) is the dredged channel which provides access to the extensive inland waterways system encompassing Lake Wellington, Lake Victoria, Lake King, and Lake Bonga. The large fishing fleets that work

off this portion of the Australian coast operate from the many ports served by Lakes Entrance.

The channel depth here is usually maintained between 3m and 5m, but the bar that fronts the entrance is treacherous. In 1978, three vessels were lost attempting to cross it. Local knowledge is essential, and local authorities should be consulted before planning a voyage here. Details of the channels and ports of the various lakes are given in a publication of the Department of Harbours and Marine, Victoria.

**Caution.—**Mariners are advised that shoaling has occurred in Lakes Entrance fairway. Mariners are further advised to seek the latest information on the bar conditions before attempting a bar crossing by phoning Gippsland Ports on 03-5152-1974 (BH) or 0418-381-366 (AH).

Mariners are cautioned to exercise special care when navigating these waters due to production wells and gas pipelines.

**Red Bluff** (37˚52'S., 148˚04'E.), conspicuous from its color, rises gradually to a height of 49m and is wooded, though not so much near the coast as inland. The bluff has a few rocks off it which do not extend far to seaward.

Mount Tara, about 19 miles NNE of Red Bluff, has two conspicuous summits with other smaller summits. The principal summit is flat-topped and has been cleared of trees.

From Mount Tara, E and NE, the country is mountainous, with some of the ranges approaching within a few miles of the coast.

The coast from the entrance to Lake Tyers trends with a curve ENE 21 miles to the Snowy River entrance and is similar to that W of the entrance to the lakes, though the sand hummocks are higher, especially toward the Snowy River, near which they attain a height of 52m. Immediately at the back of the coast, extending the whole distance, is a freshwater morass, and generally 0.5 mile from its margin is the higher back country, which along this part of the coast is about 61m high and densely timbered. The hummocky coast is faced with sand cliffs or patches, but they are uniform in appearance.

A beacon stands on a sand hummock about 1.2 miles W of the Snowy River entrance.

About 4 miles SSW of the Snowy River entrance is a patch of uneven rock bottom, upon which the least depth found was 15.5m.

**2.38 Point Ricardo** (37˚49'S., 148˚38'E.) is rocky. Hummocks on the point are about 31m high. Mount Raymond, located 6 miles N of Point Ricardo, is a conspicuous hill, 293m high at its N elevation; mountain spurs extend in a S and SE direction.

Cape Conran, about 5 miles E of Point Ricardo, is 58m high, but is not prominent. The land about the point is flat and covered with a dense dwarf scrub. The coast between Point Ricardo and Cape Conran forms a sandy bight, skirted with grassy hummocks over 30m high. In the center is one conspicuous hummock 50m high, with a sand patch near its summit, over which is a grove of tea trees. Under the E part of Cape Conran, extending 0.4 mile offshore, are numerous sunken rocks upon which the sea breaks heavily at times. At 1.5 miles inland from Cape Conran, and extending at that distance from the coast to the Snowy River, higher ground is densely timbered, with an average height of about 91m.

Beware Reef lies about 3 miles E of Cape Conran. The reef is 2m above HW, and has sunken rocks, upon which the depth is uncertain, lying E and SE of it to a distance of 0.4 mile.

**Caution.—**Two production wells with associated pipelines and restricted areas are situated 15 miles SSW of Point Ricardo.

**Pearl Point** (37˚47'S., 148˚53'E.) can be identified by two conspicuous conical sand cliffs that are located close E.

**Point Hicks** (37˚48'S., 149˚16'E.) is easily recognized by a sandy peak, 164m high, lying about 1 mile N of the cape. This summit has a gradual fall to the W of bare sand and is more remarkable when viewed from that direction. Point Hicks has four points, the S of which projects nearly 1.5 miles from the line of the coast. The cape is composed of granite, with boulders strewn over the whole face. A stone obelisk stands on the point. Everard Hill, 5 miles N of Point Hicks, is wooded and conspicuous. The hill is reported to give a good radar return up to 21 miles.

Petrel Point, about 7 miles E of Point Hicks, is 71m high and bordered by half tide and sunken rocks for more than 0.1 mile off. A rock, 9.1m high, lies close E of the point. About 0.2 mile S of the point is a small rock only 0.3m above HW. The coast between Point Hicks and Petrel Point consists of sandy beaches with rocky points having reefs lying off them for 0.2 mile. About midway along, and close to the coast, is a group of conspicuous bare sand hummocks, and to the E of this group are several sand patches.

**2.39 Rame Head** (37˚47'S., 149˚28'E.), a granite formation, rises to 113m on its E side; another summit of the same elevation rises close to the SW. To the N the land falls, but again rises gradually, until at 4 miles distant it attains an elevation of 287m. The W part of the head is fringed with rocks and a rock, awash, lies close to the SE of the extreme point.

Rame Head is reported to give a good radar return up to 22 miles.

From Rame Head the coast trends in a N direction for 1.5 miles as far as a sandy beach; then in a NE direction for nearly 1 mile to Wingan Point. Over the sandy beach, and near its W part, is a sand cliff 62m high.

The Skerries, three in number, lie close S of Wingan Point. The highest and central rock is 12.8m above HW. Close to The Skerries are several detached rocks, some above HW; the outer of these, which is covered at HW, is 0.5 mile from Wingan Point.

**Sand Patch Point** (37˚44'S., 149˚36'E.) is made conspicuous by a large body of drift sand. Nearly 0.5 mile S of the point is a pinnacle rock with a depth of 2.1m at LW, known as the Long Reef. It is a dangerous rock on which the sea breaks occasionally.

Little Rame Head lies about 4.5 miles NE of Sand Patch Point. The coast between is about 91m high and forms a rocky bight with a few sandy beaches.

**2.40 New Zealand Star Bank** (37˚47'S., 149˚44'E.), with a least depth of 15m, lies about 6 miles SE of Little Rame Head. The bank stands on an area of uneven bottom, which tends to generate a confused sea in heavy weather. A depth of

20m lies 2 miles NNW of the bank, and a depth of 37m lies 1.2 miles W of the same bank. Depths of 9.4 and 12m have been reported to lie 0.7 mile S and 1.2 miles W, respectively, of New Zealand Star Bank. Mariners are advised to give this area a wide berth.

From November to April, lobster fishing pots may be present within 3 miles of New Zealand Star Bank. They are marked by small spherical floats and occasionally by flagged buoys. Mariners are requested to keep clear of the area. From Little Rame Head the coast trends 8 miles NNE to Bastion Point, the coast between is about 91m high. As a continuous heavy swell rolls on this coast it should not be approached nearer than 1 mile; it is also fringed with sunken rocks. A conspicuous sand patch lies 1 mile SW of Bastion Point.

**Bastion Point** (37˚34'S., 149˚45'E.) is comparatively low, being only 25m high. The land behind the point, and between it and Little Rame Head, is densely wooded. A rock, 0.9m high, and a second rock, with a depth of 2.7m, lie 0.3 mile SW and 0.2 mile SE, respectively, of Bastion Point.

Tullaburga Island, about 4 miles ENE of Bastion Point, is a rock with little soil and a few bushes on the NE part.

**Gabo Island** (37˚34'S., 149˚55'E.) is composed of red granite and has a fairly prominent monument near its center. The N end of the island tapers gradually to a point, which consists of low granite boulders. The W side of the island is covered with grass and dwarf bushes. Near the center are a few sand hills whose bare sides face the SE, and only show as sand hills in that direction; the highest of these hills has an elevation of 52m.

Gabo Island is reported to give a good radar return up to 14 miles.

**Anchorage.—**On the NW side of the island is a small sandy bay, with 9.1m of water in the central part, where there is good anchorage for one vessel, except in SW gales. There is a submerged rocky ledge on the E shore. Several moderate SW gales have been ridden out in this bay. It is probable that a gale of some continuance would have to blow direct in before the swell would make the anchorage unsafe. Though there is often a heavy swell outside, scarcely any is felt at this anchorage.

From **Telegraph Point** (37˚33'S., 149˚54'E.) the coast, which consists of bare white sand hillocks, the highest being 44m, trends NE 3.7 miles to a sandy point, with a ledge of dry and sunken rocks extending 0.5 mile to the S, on which the sea nearly always breaks. This point may be mistaken for Cape Howe, as its bare sand hills make it much more conspicuous than the cape.

**2.41 Cape Howe** (37˚30'S., 149˚58'E.) is a low point, composed of stones and sand, covered with tea trees. The land to the W is almost level for 4 miles to the foot of Howe Hill and the Howe Range of mountains which extends nearly NNW. North of the Howe Range is another range called Table Hills, so that the whole aspect of the country about Cape Howe is that of a mountainous district.

Howe Hill is conspicuous, rising abruptly from the adjacent lowland, its S aspect exhibiting a steep fall and its summit being shaped like a haystack.